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APPLETONS'

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AND

REGISTER OF IMPORTANT EVENTS

OF THE YEAR

1885.

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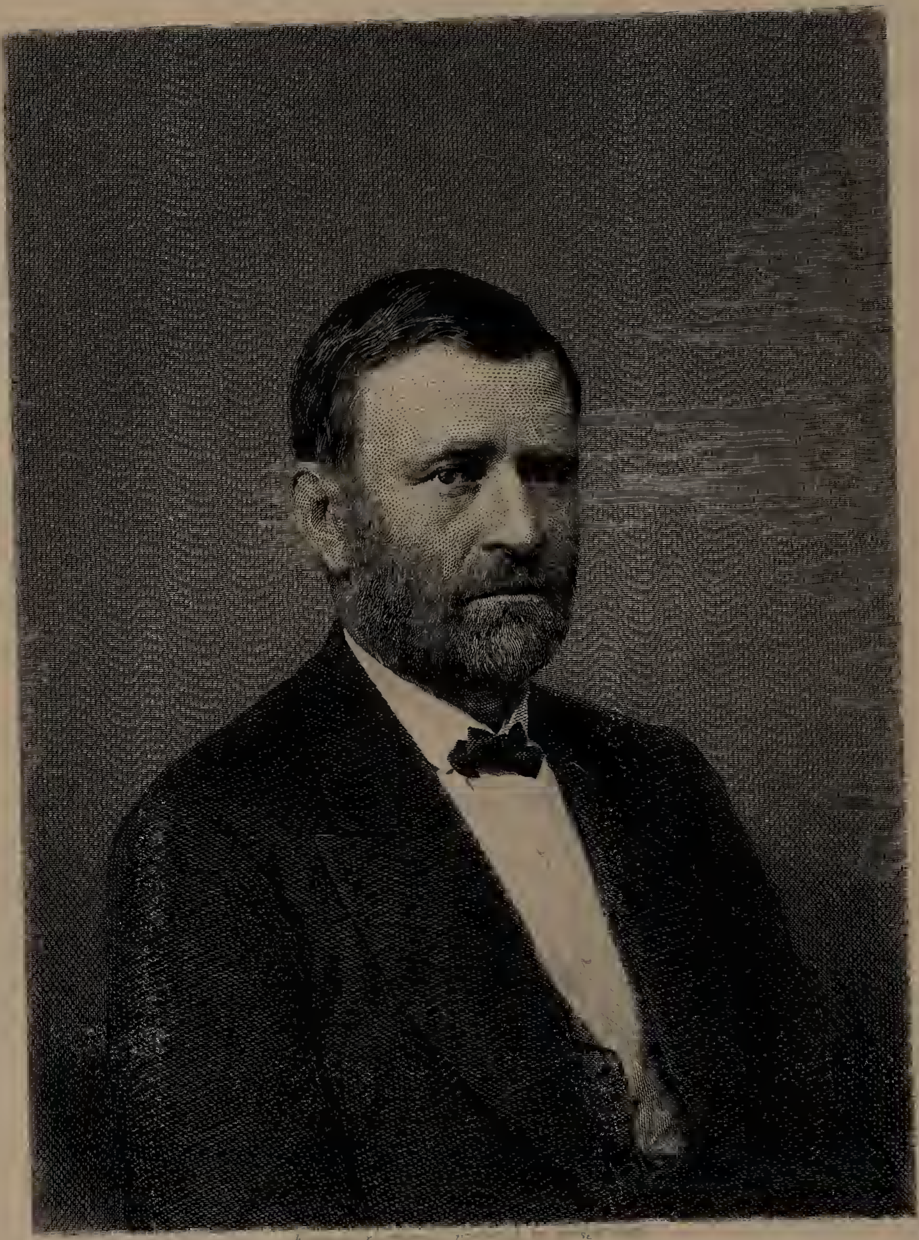

U. S. Grant

D. Appleton & Co.

PREFACE.

THE notable occurrences of the year are recorded in brief in the articles "Events of 1885" and "Disasters of 1885," where the eye can run rapidly over the list. The body of the work gives extended accounts of the most important of these, together with a great deal of information that belongs to any proper history of the year's progress, but could not be mentioned in such a table.

Three of the most eminent citizens of the United States passed away in 1885, and we present extended sketches of their careers, with portraits engraved especially for this work. Ex-President Grant, the chief hero of the great civil war; General McClellan, the organizer of the Army of the Potomac, and its commander in its first two campaigns; the Most Eminent John McCloskey, the first American Cardinal—the lives of these three men involve a very large part of our recent history, military, civil, and ecclesiastical. In the article on General Grant, the military career is written by General Horace Porter, one of Grant's staff-officers during the war and his private secretary after he became President; the civil career by Hon. George S. Boutwell, who was a member of his Cabinet. The steel portrait, which forms the frontispiece of the volume, is from the photograph preferred by the General himself. The articles on General McClellan and Cardinal McCloskey are by Mr. Joseph O'Connor, one of our ablest journalists and most careful students of American history.

General John Newton's description of his work in removing the obstructions at Hell-Gate, with its illustrations, will give the reader a good idea of one of the most interesting works of the kind ever undertaken; while other feats of engineering skill are recorded under the title Engineering, notably the Arlberg Tunnel and the Blaauw-Krantz Bridge.

In the department of medicine, the events of the year were the treatment of the cholera epidemic in Europe and the new theory of hydrophobia. The article on Cholera is by Dr. M. S. French, of Philadelphia; and the article on Hydrophobia by Dr. F. S. Billings, of New York, in whose charge the children bitten in Newark were sent to Paris to be treated by Pasteur.

In the article on the United States we present a good portrait of each member of President Cleveland's Cabinet. The President's portrait was given in last year's ANNUAL CYCLOPÆDIA. Several States took a special census in 1885, and the principal figures are given in the articles on those States. The Canadian articles present a full history of the Northwest Rebellion and the career of Riel, together with other matters of interest in the Dominion.

In Europe the never-ending Eastern Question is still prominent, and its latest effects may be read in the history of the war between Bulgaria and Servia, of which we give a full account in the article on the latter country. The article on Egypt is contributed this year by Colonel Charles Chaillé Long, who saw hard service in that country, both as an aide to General Gordon and as acting consul in Alexandria. The rise of the Conservatives to power in Great Britain is recorded, with portraits of the principal members of the Salisbury Ministry. The reader will be better enabled to understand the land-league and crofter troubles in Ireland and Scotland, if he turns to Prof. King's carefully written article on Land Laws. The movements of European powers for the acquisition of new territory in remote quarters of the globe are related in the articles on Papua and the Caroline Islands. The articles Knights of Labor and Knights of Pythias are compiled from information obtained at headquarters.

The out-door sports described in this volume are Base-Ball, La Crosse, and Yachting—all treated by experts. The subject of Yachting had a special interest in 1885 from the race between the "Puritan" and the "Genesta."

Our article on Patents is continued, showing what has been done during the year; and a wonderful instance of the ingenuity of modern inventors is presented in the copiously illustrated article on Automatic Musical Instruments.

Rev. A. C. Kendrick, D. D., of the American committee to revise the New Testament, tells the story of the revision of our English version of the Bible, completed in 1885. Mr. John D. Champlin, Jr., one of the most successful of American cyclopædists, furnishes an article on the Fine Arts in 1884–'85, and this subject will be continued by him from year to year. Dr. Titus M. Coan, who has made a special study of mineral waters, both in the United States and in Europe, gives the latest results of his investigations. Mr. G. K. Gilbert, employed for many years on the United States Geological Survey, both in the field and in the office at Washington, presents some of the more notable results of that work, together with a colored map showing the great terminal moraine of the second glacial epoch. Among the other special articles are those on Bimetallic Currency, American Game, Terrapin-Culture, Slaughtering by Machinery, Charity Organization, and Dr. Swift's excellent article on the progress of astronomy.

At the end of the book the reader will find an index covering the entire ten volumes of the series.

New York, *March 4, 1886.*

THE
ANNUAL CYCLOPÆDIA.

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AFGHANISTAN, a monarchy in central Asia, occupying a mountainous country between the Oxus and Indus valleys. It is the only remaining territory separating the Russian possessions in Asia from the Indian Empire. The ruler is Abdurrahman Khan, Ameer of Afghanistan, whose residence is at Cabul. He was placed on the throne under the protection of the British Government, after the conquest of the country in the war of 1878–'79, and the abdication of his predecessor, Yakub Khan.

History of the Afghan Question.—In 1836, two years after the question of the Persian royal succession had been arranged to the satisfaction of England and Russia, the Russian Minister at Teheran, Count Simonich, incited the Shah of Persia to conquer and reannex Herat for the purpose of consolidating his power by a brilliant achievement, and of permanently suppressing the slave-traffic. Although the Russian Government denied having imparted such advice, and subsequently sought ostensibly to dissuade the Persian ruler from such a course, when the Shah undertook the expedition against Herat, he was aided by Russian money and accompanied by Simonich, who acted as his military adviser. The defensive works constructed under the superintendence of a young English officer, Pottinger, prevented the city from falling into the hands of the Persians. The Ameer of Cabul had already, in 1836, made overtures for being taken under Russian protection. In 1837 Great Britain sent a commercial mission, headed by Capt. Alexander Burnes, to Dost Mohammed. Upon the appearance of a Cossack officer, Vickovich, at Cabul, Burnes was driven out of Afghanistan before he could obtain an audience with the Ameer. The Persian Government, while engaged in operations against Herat, entered into a treaty with the Afghan rulers of Candahar whereby that province was to become a dependency of Persia, receiving in return the government of Herat and a guarantee of military assistance against attack from any quarter. The Shah was frightened out of his designs on Herat by the hostile attitude of the English Government, which made a naval demonstration in the Persian Gulf, and occupied the island of Karrack. The Russian Minister, Count Nesselrode, pro-

THE OLD CITADEL OF HERAT.

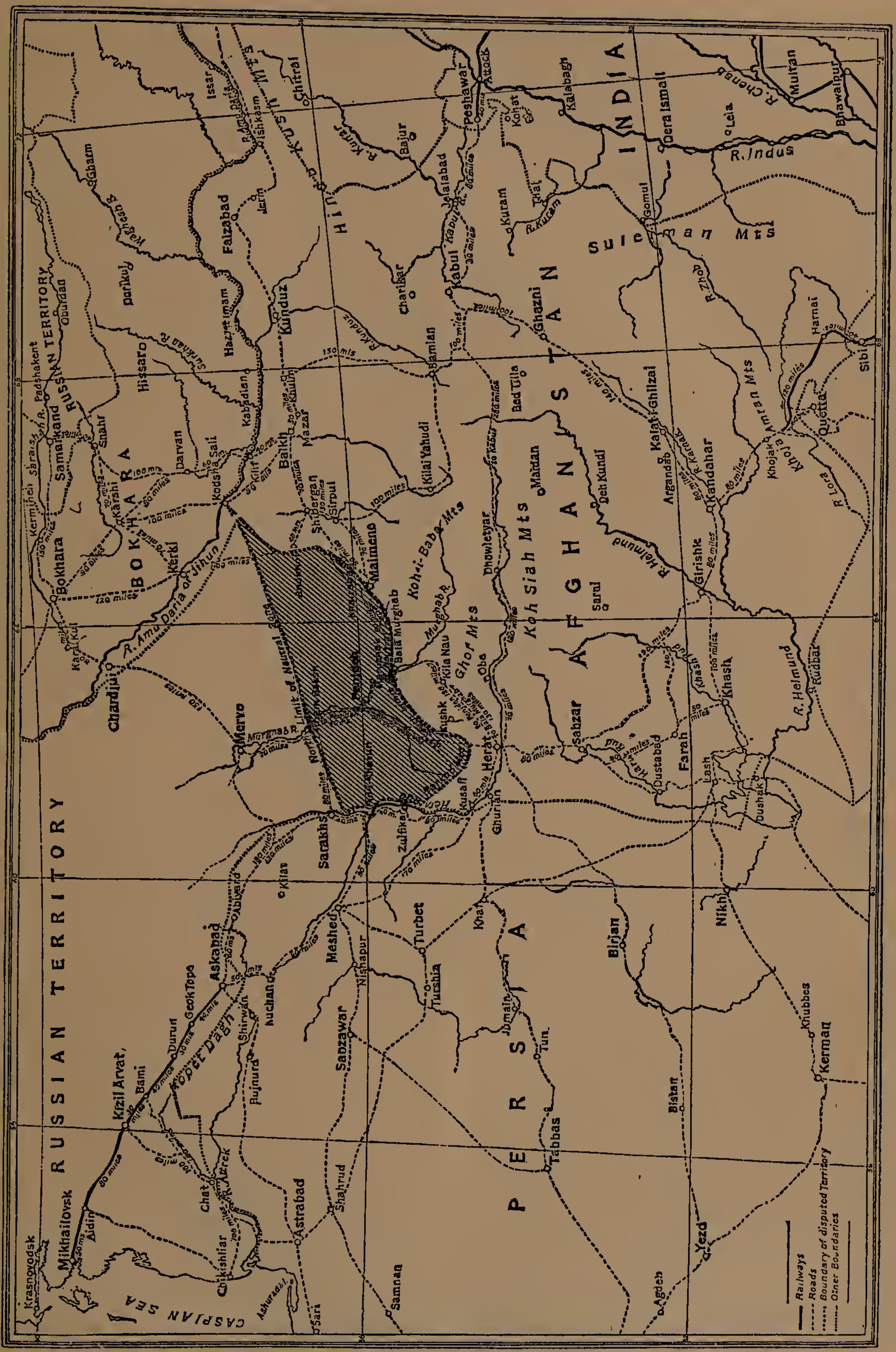
tested that the treaty with the Candahar chiefs entered into upon Russian advice was intended to prevent the dangers of Persian annexation, and the mission of Vickovich was, like that of Capt. Burnes, for purely pacific and commercial objects. To appease England and restore the good understanding of 1834, Vickovich was recalled and the Candahar arrangement disavowed.

It was not until Turkistan was annexed by Russia in 1864 that England again began to regard with suspicion and alarm the advance of the Russian power toward the Indian frontier. The Earl of Clarendon proposed in 1869 that Afghanistan should be recognized as a neutral zone between British and Russian possessions. Prince Gortchakoff approved the idea, and declared that Afghanistan was outside of the sphere of Russian influence. In 1870 the Russian Government refused to aid Abdurrahman Khan, the present Ameer, to wrest the throne of Cabul from Shere Ali. About the same time the English Cabinet was alarmed at rumors of a Russian plan to capture Khiva. Gortchakoff denied that any such intention existed, or that hostilities against the Khan were contemplated, except in case that prince should renew his intrigues among the Kirghiz. In 1871 fresh reports of an intended expedition led to additional inquiries. The Russian Government explained that a military reconnaissance had been made for the purpose of frightening the Khan, who was only required to restrain his subjects from preying on Russian commerce and imprisoning subjects of the Czar. Count Shuvaloff was sent in 1872 on a special mission to London to allay the excitement and susceptibility of the English. He said that an expedition was planned for the following spring, to consist of only four and a half battalions, with the object of punishing acts of brigandage and recovering Russian prisoners. The expedition was carried out on a larger scale than that announced, and resulted in the acknowledgment two years after of a Russian protectorate by the Khan of Khiva, and the cession to Russia of the right bank of the Oxus, with the exclusive control of that river.

The English were disquieted anew by rumors of an expedition against the Merv Turkomans, and on the ground that the presence of the Russians in Merv would be likely to entail border disputes and complications with Afghanistan, which must be preserved as an independent zone, declared that the Indian Government would consider its tranquillity imperiled by a Russian advance to Merv. For ten years English dispatches repeatedly warned the Russian Government not to meddle with the Tekke Turkomans, and the Russian Cabinet constantly disclaimed the intention of going to Merv until within six months of its occupation. In 1869 Prince Gortchakoff offered no objection to English officers visiting Cabul, though he agreed with Lord Mayo that Russian agents should not. Afghanistan was again and again declared to be beyond the sphere of Russia's action. There was nevertheless some correspondence between the Ameer and the Russian authorities in Turkistan from 1870 till 1878. In the latter year, when England menaced Russia in relation to the San Stefano Treaty, the Czar's Government responded by sending Gen. Stoletoff to Cabul to negotiate an alliance against England. The result was the Afghan war of 1878–'79, in which Russia gave no aid to the Afghans, having no further quarrel with England, and the establishment in 1880 of Abdurrahman on the throne as the nominee and paid ally of the British Government.

When, with the aid of British gifts of money and arms, Abdurrahman had established his authority at Candahar and Herat, and overcome his rival, Ayub Khan, the British Government agreed, in the summer of 1883, to pay him a fixed annual subsidy of twelve lacs of rupees out of the Indian revenues. Shere Ali and his predecessors had received only irregular and temporary subsidies. The English Government, furthermore, changed its traditional policy by giving a pledge to the Ameer, though still refraining from a formal treaty, promising that "if any foreign power should attempt to interfere in Afghanistan, and if such interference should lead to unprovoked aggression on the dominions of your Highness, in that event the British Government would be prepared to aid you, to such extent and in such manner as may appear to the British Government necessary, in repelling it, provided your Highness follows unreservedly the advice of the British Government in regard to your external relations."

The Boundary of Afghanistan.—In the *pourparlers* of 1872 and 1873 the Russian Government accepted a line that would be regarded as the boundary of Afghanistan and the extreme limit of "the sphere within which Russia may be called upon to exercise her influence." Along the border of Bokhara, where Russian influence was already established, and where an advance from Tashkend in the direction of Balkh and Cabul was apprehended, a definite geographical frontier was recognized in the river Oxus, from its confluence with the Kokcha, down to Khoja Saleh, where it leaves the Afghan border and enters the steppe. This riverain boundary is not accepted by the people of the country in the upper course of the Oxus where the Galchas and Uzbecks are settled on the river-banks and the northern slopes of the Hindoo-Koosh. The large state of Karategrin lies entirely on the north side of the river, and Badakshan on the south side, but the smaller states of Wakhan, Roshan, and Shugnan, over which the Ameer of Cabul exercises a precarious and intermittent dominion, spread over both banks, as does also Darwaz, which owes fealty to the Ameer of Bokhara. All these peoples have been accustomed to appeal to the Bokharan potentate as the protector of their race against the greed and tyranny of the Afghans. Farther down the banks of the river



AFGHANISTAN AND THE NEUTRAL TERRITORY.

are peopled mainly by Tadjiks and Uzbecks, with a sensible Afghan element on the south bank. Here the river boundary corresponds more nearly to the ethnic and political conditions. West of Khoja-Saleh the boundary must be an air-line unless it follows the mountain-ranges. It did not occur to the Russians, who had no interests in that section nearer than the shore of the Caspian Sea, to propose the latter; nor were the English interested in defining the line by fixed landmarks, supposing as they did that the fierce brigand tribes of the desert formed an insurmountable obstacle to the approach of Russia in that direction. The districts of Aktcha, Sir-i-Pul, Maimene, Shibergan, and Andkhoi were recognized as belonging to Afghanistan; but westward of the latter point no frontier line was indicated in the agreement.

When the not altogether "voluntary" submission of the Merv Turkomans, effected in disregard of the assurance given years before, disquieted the English people, the Russian Cabinet revived the proposal of a joint delimitating commission in the spring of 1884. The head men of the Sarik and Salor tribes about the same time took the oath of allegiance. This brought the last confines of Turkomania under the scepter of the White Czar, and made his dominions conterminous with the province of Herat. The Russian proposition to survey "the Afghan frontier from Khoja-Saleh to the Persian frontier in the neighborhood of Sarakhs" was accepted by the London Cabinet. Before negotiations relative to the joint commission were concluded, the Afghan Ameer sent a military force to occupy the Sarik town of Penjdeh. All the English maps of recent years, excepting one prepared for the India office to represent especially the boundary of Persia, which draws the Afghan frontier south of Penjdeh, give the boundary as a vague, very slightly incurved line running from a point on the Heri Rud, just above Sarakhs, to Khoja-Saleh. This line was followed in the Russian staff maps. Yet the only official definition of the boundary was that embodied in the Anglo-Russian agreement of 1872–'73, which bound Russia to respect the territories actually ruled at the time by Shere Ali. The oasis of Penjdeh was then in the possession of the independent Sarik Turkomans, while the country to the west, including the district of Badghis, which extends to the Borkhut spur and the Paropamisus, was uninhabited. The only district north of the Paropamisus range occupied by Afghan subjects was the country of the Jemshidis, on the head-waters of the Murghab, about Kala Nau. The same conditions existed at the time of the delimitation negotiations of 1884, except that the Salor Turkomans had settled in the pasture-lands of the Heri Rud valley, between the Borkhut mountains and Sarakhs, since the suppression of the Tekke raiders, and the head men of the Sariks of Penjdeh had recently accepted the rule of the Czar, which was acknowledged also by the Salors. Before the forcible occupation of the town of Penjdeh by the Ameer's troops in June, 1884, the extreme Afghan frontier post on the Murghab was Bala Murghab. In Badghis and on the Heri Rud, north of the Borkhut mountains, there were no Afghan settlements or military posts. The Russian Government was therefore prepared to claim the whole region north of the Paropamisus and the Borkhut spur, between the Murghab and the Heri Rud rivers, first opened to peaceful occupation by the suppression of the Tekke robbers who formerly overran this district in their incursions into Persia.

When M. de Giers informed Sir Edward Thornton in 1882 that Russia had no intention of advancing to Merv and Sarakhs, he at the same time impressed upon him the importance of inducing his Government to agree upon a definite boundary-line from Khoja-Saleh to the Persian frontier in the neighborhood of Sarakhs. This appeal, subsequently repeated both in St. Petersburg and in London, was totally neglected by the English Government. Meanwhile Abdurrahman Khan, having consolidated his rule in Herat and north of the Hindoo-Koosh, betrayed a disposition to encroach upon lands lying outside the line to which Russia considered that he was confined by the agreement of 1872. In the autumn of 1883 he captured Shugnan. Russia thereupon moved upon Merv and Sarakhs in the spring of the following year. The English Government then began to press in their turn for a settlement of the boundary. During the negotiations Abdurrahman seized upon Penjdeh, whereupon the Russians made another countermove to Sariyazi and Pul-i-Khatum, transgressing the line to which they had virtually agreed on the Heri Rud as a check to the Ameer's invasion of their sphere of influence at Penjdeh, and in the petty khanates that were dependencies of Bokhara.

The Delimitation Commission.—The British Government eagerly grasped the opportunity afforded by the hitherto neglected proposal of the Russian ministry to fix the three hundred or more miles of boundary left unsettled in the line of Russia's recent advances, which seemed to threaten Herat, long regarded as the "key of India." The latest Russian acquisition, Sarakhs, a strong position on the Heri Rud, in the "no-man's-land" on the Persian frontier, appeared to Englishmen to have no other motive than to creep within striking distance of Herat. The extension of the Russian strategic railroad from Kizil Arvat to Askabad, and the rapid development of commercial and military activity in Turkomania, frightened the Liberal Government in England out of their policy of "masterly inactivity." Indian troops were massed in the newly acquired districts in Beloochistan, British authority was imposingly displayed in Kelat, punitive expeditions were carried out against the unruly tribes of southern Afghanistan, and the Sibi-Quetta Railroad, torn up by the Liberals after it was partially laid by their predecessors, was begun again and pushed forward with all haste. The British Delimitation Commission was appointed at once, and composed of an imposing list of frontier and military experts and native officials, Hindoo and Mohammedan, including Afghans in the Indian service. Gen. Sir Peter Lumsden, an officer of thirty-seven years' standing, who had acted as a member of the Military Commission to Afghanistan in 1857–1858, and performed other important services in the East, was made chief commissioner. The principal topographical experts were Col. Patrick Stewart, who explored the Turkoman country in 1880 in the disguise of an Armenian horse-trader, and had since been employed as a political agent in the Persian town of Khaf, near the Herat frontier; Condie Stephen, second secretary to the legation at Teheran, a versatile linguist; and Major Napier, author of a report on the northern frontier of Persia. Not content with a formidable array of technical experts, the British authorities sent with the commission a large military guard, in order to counteract the effect of the Russian troops in Turkomania and to prepare the Afghans for a possible conflict. The Indian contingent with the military force, consisting of 200 picked men from the Bengal Lancers, 200 infantry, and several hundred armed camp-followers, under the command of Lieut.-Col. Ridgway, was to proceed through Afghanistan from Quetta, while Gen. Lumsden and the principal officers of his staff journeyed through Europe, the Caucasus, and Persia. The entire commission numbered 35 Europeans and 1,300 natives. There arose a perplexing and ignominious *contretemps* in regard to the march of the Indian section. The Ameer could not guarantee the safe passage of the red-coats, so lately arrayed in a deadly struggle with the Afghans, over the regular Candahar route, and refused to furnish them with an escort. They were therefore obliged finally to take the Nushkhi route through the desert along the Persian border, passing through the remotest straggling settlements of Afghans.

The Russian Government appointed a subordinate officer as its representative on the Boundary Commission; but, influenced by expressions of dissatisfaction in England, recalled the appointment, and made Gen. Zelenoy chief commissioner in September, 1884, with M. Lessar, Major Alikhanoff, and other officers familiar with the frontier, as expert assistants.

The Indian section of the Afghan Frontier Commission, with their Sikh guard and followers, and over 2,000 animals, reached Kushan in the Herat valley in the middle of November, 1884, having been nearly two months on the march over the desert route of 800 miles along the western frontier of Afghanistan. The Ameer had proclaimed terrible penalties against any of his subjects who should interfere with their peaceful passage, and his officials were solicitous in their attentions and protection; yet the Afghans showed their animosity in every way short of attacking the party. The inhabitants of the Herat valley, on the contrary, having a grateful remembrance of English money freely expended among them, gave them everywhere a hearty welcome. By the population of the valley, which has received a strong infusion of Turkoman blood, but is Persian in language and customs, their Afghan rulers are hated as much as they are feared. Sir Peter Lumsden arrived at Kushan Nov. 19.

The English commissioners, on arriving at the Afghan frontier, found no trace of their Russian colleagues; but they found Cossacks picketed at Pul-i-Khatum on the Heri Rud, forty miles south of Sarakhs, and confronting the Afghan outposts at Penjdeh. Sir Peter Lumsden assumed that the plan of a peaceful demarkation was defeated, and that a state of hostilities existed. In visiting Sarakhs he held no communication with Gen. Komaroff, the Russian commander, who came to Sarakhs expressly to meet him. He went into winter-quarters at Bala Murghab, south of Penjdeh, whence he incited the Afghan garrison to hold their ground, while his military subordinates directed the defensive operations. He showered gifts on the Sarik inhabitants of the district in order to induce them to renounce their allegiance to the Czar.

The Russian Advance.—Sarakhs was occupied early in 1884, prior to the negotiations in relation to the Delimitation Commission. Soon after, the Czar's representative received the submission of the elders of the Salor Turkomans settled along the Heri Rud, between Sarakhs and the Borkhut mountains, and of the Sariks, dwelling in and around Penjdeh. Sarakhs was a Persian outpost, separated by 100 miles of desert country from the next Persian garrison, but maintained as a protection against Turkoman raids. It is also the point where the caravan routes to Meshed from Merv and Bokhara, from Maimene and Afghan Turkistan, and from Herat, all converge, and therefore admirably adapted for a trading center. The Russian Government obtained possession of this point by the voluntary cession of the Shah of Persia, who needed no longer to keep up a garrison since the conquest of the Turkoman marauders by Russia. The Cossacks first occupied the deserted site of the ancient town on the opposite side of the river, which is the better military position. Stress was then laid on the fact that it was not the Persian Sarakhs, but Old Sarakhs, outside of Persian territory, that was occupied; yet, after the withdrawal of the Persian garrison, they moved into the barracks in the new town, through which the road to Herat passes. Major Alikhanoff, an astute Circassian, thoroughly versed in Oriental ways, the officer whose diplomacy had brought about the submission of the Merv Tekkes, proceeded to Penjdeh in June, 1884, and found the seat of the Sariks occupied by a strong Afghan garrison. Simultaneously with Alikhanoff's march to Penjdeh the St. Petersburg Government announced officially, on June 23, that the Sariks of Penjdeh had become subjects of the Czar. The English Cabinet replied, June 29, that Penjdeh belonged to Afghanistan. Perceiving that their intention to round off the Russian dominions by the inclusion of the whole Turkoman nation would meet with resistance, the St. Petersburg Government allowed Gen. Zelenoy to remain at Tiflis, and left the military authorities in Turkistan to push on the Cossack outposts as far as possible toward the limits of the Turkoman country. Gen. Rosenbach, who was made Governor-General of Turkistan in the place of Gen. Tchernajeff after the annexation of Sarakhs, in order to please the English, was now superseded by the aggressive Komaroff. The Russian lines were advanced before the arrival of the British commissioners from Old Sarakhs, which was occupied in July, 1884, to Pul-i-Khatum in October and November, and on the Murghab from Merv, where a garrison was posted, in February, to Yolatan, at the edge of the oasis, in September, and in November across the desert to Sariyazi. Subsequently the Russians occupied Pul-i-Khisti, on the Kushk, south of Penjdeh, and Akrobat, on the border of Badghis proper, and advanced up the Heri Rud to Zulfikar Pass.

Gen. Lumsden entered into a lively correspondence with his superiors. The authorities at Downing Street demanded explanations of the delay in sending the Russian commissioners, and of the advance of the Russian lines. A categorical demand was made that the Russian outposts should retire from the debatable zone to their former positions pending the delimitation. To this the Russian Government returned an absolute refusal on Feb. 24, 1885, but gave assurances that its officers had received orders to avoid conflicts with the Afghans, and declared that complications could arise only if the Afghans attacked the Russian posts. Sir Peter Lumsden then advised the Afghans to maintain their present positions, but to abstain from offensive operations. The British Government assumed a threatening attitude, and made preparations for war. The Russian Government at this point offered as a last concession to accept the Zulfikar-Akrobat-Maruchak line of demarkation. The hasty demand for the retirement of the Russian outposts, the English premier declared, when afterward questioned, was allowed "to lapse." On March 13, Mr. Gladstone announced on the strength of M. de Giers's conciliatory assurances, that the two governments had agreed that there should be no further advance of either the Russian or the Afghan troops while the negotiations were in progress. As no definite agreement of the sort had been entered into, Lord Granville telegraphed to know if the agreement or arrangement was accepted by the Russian Government. On March 17 came the reply ratifying the agreement, subject to a reservation—"unless in the case of some extraordinary reason"—such, for instance, as a disturbance at Penjdeh. This "agreement," which had its origin in an inferential construction of Russian dispatches by Mr. Gladstone, and hence was, on second thought, explained as an "arrangement," was, after the acquiescence of the Russian Government, magnified into a "sacred covenant."

The Disputed District.—The debated region is a tract in the shape of a wedge intervening between Afghanistan and Persia. The portion principally in dispute is inclosed between the Murghab and the Heri Rud rivers, and extends from the Borkhut mountains to where the desert proper begins, near Sarakhs and Yolatan. The entire region is without inhabitants, except the Turkoman nomads, who pasture their flocks there during a part of the year, and some colonists planted by the Ameer of Afghanistan on the Murghab and in other places, since the frontier question arose. The southern portion, watered by the upper Kushk and its tributary streams, is the district of Badghis, formerly occupied by the Char Aimaks of Herat, but depopulated by the Khivan auxiliaries of the Shah, during the siege of Herat, and since used as a pasture and hunting ground by the Turkomans. The region to the north, traversed by the Turkomans of the Tedjend and Murghab oases in their predatory forays into Persia, has been without a settled population and known as a "no-man's-land" for two hundred years. The English sought to extend the name Badghis, that by which the northernmost district of Herat has been designated, to the whole disputed region. There is a range of hills crossing the country 36° north of the Borkhut mountains to the Heri Rud at Pul-i-Khatum. This chain is called by Lessar the Elbirin-Kir. The Kushk and its tributaries wind among another congeries of low mountains, the outskirts of the Paropamisus. The whole country is abundantly watered by the numerous small tributaries of the Murghab and the Heri Rud. It is generally extremely fertile and nearly everywhere arable. Though now deserted, it once supported a large population, and contains the ruins of many towns. Poplars, mulberry-trees, willows, and other trees grow thickly along the water-courses, and pistachios stand scatteringly on the hill-sides. Grain will grow well as far as to the north of the Elbirin-Kir. In the east, along the banks of the Kushk and the Murghab, profuse irrigation produces a prolific yield of grain, rice, and many kinds of fruit. In the plains to the west are salt lakes which supply all the neighboring districts with salt. This salt is of excellent quality, and constitutes the chief export of the Turkoman population. The grazing-grounds of the Salor Turkomans are along the Heri Rud, those of the Sariks in the valleys of the Murghab and the Kushk.

The English resisted the Russian claims to the lands of the Salors and Sariks, mainly on strategical grounds. As Herat was a part of Afghanistan, and the part that it was most necessary to preserve from Russia, so whatever positions were essential for the most favorable defense of Herat must be awarded to Afghanistan. If the Salors and Sariks occupied territory in which the approaches to Herat were situated, then the Czar must renounce their allegiance and treat their country as a neutral and inviolable zone, belonging geographically, though not politically, to Afghanistan. At Akrobat or Zulfikar, the military critics declared, the Russians would have gained the glacis of Herat, having planted themselves within *coup-de-main* distance, at a position whence an army could descend upon the city in a week's time. The two practicable routes to Herat follow the valleys of the Heri Rud and the Murghab. The Merv-Penjdeh route is not suitable for the passage of a large body of troops. An army could not assemble in Merv except slowly, in detachments, and amid many difficulties and privations. Nor do the oasis and the narrow strip of cultivated ground along the Murghab produce a sufficient surplus of food beyond the requirements of the dense population. Furthermore, the Penjdeh road to Herat is not passable for wheeled transport.

Assuming that the Russians have designs upon Herat, and eventually upon India by Skobeleff's plan of "a hard blow struck in the front simultaneously with a mutiny fomented at the rear of the Indus," many supposed that Russia was disappointed in the Merv route, and hence hastened to possess herself of Sarakhs and the other approach. All invaders of India have, however, found it necessary to secure the adherence or neutrality of the Mervians. By subduing the intrepid warriors of the steppes, Russia added greatly to her prestige and fame in Asia. She secured, moreover, an important accession of strength, for the Tekke Turkomans can furnish 40,000 of the best irregular cavalry in Asia, who are superior in fighting qualities to an equal number of Afghans.

The Heri Rud route presents no natural or topographical difficulties. Sir Charles MacGregor, who explored it in 1873, declared that he could drive a mail-coach from Meshed to the Khyber Pass. The engineer and diplomatist, Lessar, who visited the country in 1882, to explore a railroad route, found various easy passes over the Borkhut mountains, and one, the Khom-bou or Robat Pass, especially suitable for a railroad. The Elbirin-Kir range presents but slight difficulties; while the southern branch of the Paropamisus, marked on the maps as a mountain-chain, consists merely of gently sloping hills. With steam connection between the Caucasus and Sarakhs, to which point the extension of the Michaelovsk-Askabad Railway has been authorized, troops can be forwarded from Russia at the rate of a division a week. The arable lands, claimed by Russia as the possessions of her Turkoman subjects, are sufficient in extent and productivity to maintain an army. Hence it was desirable for England, from the military stand-point, to require the Russians to withdraw to the edge of the desert, and not merely to secure for Afghanistan the mountain-passes, which are numerous and can easily be forced or turned by by-paths.

The English authorities based the Afghan claim to Penjdeh on historical grounds. Although Abdurrahman Khan first asserted his sovereignty there in 1884, the population of the district formerly paid tribute to the rulers of Herat. About sixty years ago, the Jamshidi and Huzara branches of the Aimak tribes dwelt there. The Ersari Turkomans, who succeeded them, paid tribute to the Afghan Government, as did also the Salors who came later. The Sariks, when expelled from Merv by the Tekkes, moved into the district, and drove out the other inhabitants about 1856. From them the Afghans appear to have collected tribute occasionally on the ground that they pastured their flocks in Afghan territory, when herbage failed in their oasis or when the Tekkes disturbed their security. The Sariks were addicted to brigandage before the coming of the Russians. They made incursions into Afghanistan as well as into Khorassan, and were often visited with Afghan reprisals. In 1883 the Ameer appointed as his representative in Penjdeh an official named Usman Khan. In April, 1884, after the Russian occupation of Merv, he appointed Aminulla Khan, a Jamshidi chief, governor of the Penjdeh district, and in June Afghan troops took forcible possession of the town. The Afghans would have advanced beyond Penjdeh, but Col. Alikhanoff met them at Sariyazi and drove them back after a slight skirmish. The small khanate of Shugnan in Afghan Turkistan was seized by Abdurrahman in 1883, although in the agreement of 1872 it was excluded from the territory claimed by Afghanistan. These acts were the primary cause of the Russian advance, and of the overtures for delimitation.

Herat. — The strategical value of Herat in relation to the conquest of India consists not merely in its geographical position in the only line of approach from the Russian base to the Indus valley, the only route where a railroad can be laid, but in the extraordinary fertility of the district, which is capable of supporting a large army for an indefinite period without having to draw any supplies of food from Europe. The same consideration would render Herat and the fertile slopes of Afghan Turkistan, where also the Afghans are present only as harsh and alien conquerors, valuable acquisitions in themselves, easily developed under a reign of peace and justice into flourishing communities, capable of balancing the large annual deficit in the Turkistan budget, and of unlocking a mine of wealth for the benefit of Russian commerce.

The climate of Herat is temperate. The hottest days of summer are followed by cool nights. The soil of the Paropamisan valleys, of unrivaled richness, is abundantly watered by the many perennial streams that flow into the Murghab and the Heri Rud. The wheat, equal to the Jerusalem wheat of Khiva, ripens in June. The rice is one of the chief articles of food consumed by the Turkomans of Merv and the Hezaris in the East. The grapes are the finest in Asia. Apples, pears, and melons are delicious and abundant. The mutton is celebrated throughout the East for its delicate savor. Good wool is abundant. There is plenty of wood for building, and a great variety of valuable minerals awaiting development. Carpets, furs, and different sorts of leather are manufactured in Herat and exported to near and distant markets. Since the Russians have reduced the Turkoman robbers to orderly ways, and restored the fields in the north for peaceful culture, the agricultural product of the district can be increased to several times its present amount. Vambéry estimates that the revenue may be increased tenfold from this cause.

Herat has been a prize for which Persians, Afghans, Uzbecks, Turkomans, and Hezaris have contended for ages. The peaceful and industrious inhabitants have never been free from a foreign yoke. The province has often had an independent government because its remarkable resources have enabled the governors to throw off their allegiance to the central powers at Teheran, Ispahan, or Cabul. The original Iranian stock is represented by the Sunnite and Shiite Persians of Herat, the Parsivans, who dwell in the city, and in the country south as far as Ferrah, and furnish the educated element in other Afghan cities. They possess a brilliant intellectual history extending back into the middle ages, and in intelligence, wit, culture, and industry, they rank with the Persians of Shiraz and Ispahan. Averse to military service, they have been content to accept a position of political inferiority to the warlike races that have dominated them. The other inhabitants of the Herat district are comprised in the Char Aimak, or Four Tribes. These are the Jemshidis, inhabiting the upper valleys of the Kushk and the Murghab; the Firuzkuhis, dwelling to the east of the Jemshidis, about Kalei-Nau, and like them of pure Iranian origin; the Teimenis, a farming and trading clan, who live in the south; and the Timuris, who occupy the border-lands between Herat and Persia. The Huzaras, being Sunnites, are not technically included in the Four Tribes, though always counted as another Char-Aimak tribe. The peace-loving Parsivans, as well as the Char Aimaks, who are trained to warfare, long for the independence of Herat, and hate the Afghans and the Persians intensely. The population of the Herat district exceeds 1,000,000 souls.

The possession of Herat by Russia would be likely to lead to the acquisition also of Afghan Turkistan. Andkhoi, Maimene, and the other small khanates east of Herat, were, until recently, dependencies of the Ameer of Bokhara. The Uzbecks and Tadjiks on the left bank of the Oxus and in the valleys of the Hindoo-Koosh groan under the Afghan yoke more sorely than do the Heratis. Counting the Ersaris near Khoja-Saleh, the Achmaylis in Serpul, the Ming and Daz tribes in Maimene, the Kungrats in Aktche, the Kiptchaks around Balkh, the Kanglis in Khulm, the Afshars and Kara-Turkomans in Andkhoi, etc., there are about 1,000,000 people of Turkish race in this part of Afghanistan.

The Penjdeh Affair.—On the 30th of March occurred the very circumstance on which the temporary agreement not to advance was made contingent by the Czar's Government—a collision between the Afghan and Russian forces in the neighborhood of Penjdeh. Since November Russian troops had been gathering in the Sarik district, where the Afghans held the town of Penjdeh and the line of communications along the Murghab. The Afghan sentries were posted on the bluff of Aktapa, directly north of the town, at the confluence of the Kushk and Murghab, the strategical key to the district, commanding the roads in all directions; but the Russians had pushed their line up the left bank of the Kushk to the south of Pendjeh. This town, and with it the Sarik district, were in the beginning the leading subject in the boundary dispute. Col. Alikhanoff took up his position over against the town simultaneously with the arrival of the British Commission in the Herat valley, thus emphasizing the claim presented diplomatically in the negotiations with the London Government, opened by M. de Giers. In a parley with the Afghan commander at Penjdeh, he used threatening and provocative language. Sir Peter Lumsden at once showed forth the belligerent aspect of his mission, already indicated in the massing of troops in Beloochistan and other warlike preparations, in the vigorous diplomatic attitude of the British Government, and in his armed escort and military staff. He proceeded forthwith to Bala Murghab, above Penjdeh, with his whole force. The Afghans were given to understand that they must show themselves ready to fight and hold their ground at any cost. Tactical arrangements were looked after by English officers. The Russians responded by strengthening their force. The lines were advanced on both sides until they met. As a conflict seemed likely to occur at any time, Gen. Lumsden, after remaining in the neighborhood of Penjdeh from Dec. 13, 1884, till February, 1885, during which time the officers explored and surveyed the districts of Andkhoi, Maimene, Akcha, and Shibergan, thought it advisable to withdraw with the main body of his party to Gulran, near the other line of Russian advance, up the Heri Rud into the disputed Salor district. Col. Ridgway was left with a detachment on the Murghab, and Capt. Yate was placed in Penjdeh in the capacity of military adviser to the Afghan commander. At the dangerous pass to which affairs had been brought, the chief commissioner thought best to reduce his party. A large number of the attendants were accordingly sent back to India by way of Persia.

On March 30 the collision, anticipated if not desired by the military authorities on both sides, occurred at Pul-i-Khisti, on the Kushk river. A Russian outpost had been stationed at this point, called in the Turkoman language Dash Kepri, previous to the March agreement. After the covenant, the Afghans had crossed the river and occupied the same position. This movement, on which the subsequent controversy chiefly hinged, was described by Sir Peter Lumsden as a defensive manœuvre to meet Russian demonstrations, and not an advance of the Afghan line. The Russians approached Dash Kepri, on the left bank, March 25; but finding the Afghans intrenched at the bridge of Pul-i-Khisti, they withdrew and took up a position three miles back. Gen. Komaroff opened communications with Capt. Yate on the 26th, and informed him that the left bank of the Kushk was Russian territory, a claim identical with that presented in London by the Russian representatives. Gen. Komaroff concentrated the Murghab detachment at Iman Baba on March 18, and, assuming the direct command, moved forward. On the 25th they encamped within three miles of the Afghan position at Ak Tapa. Their vanguard was at Kizil Tapa, a mile from Pul-i-Khisti. At Fort Kizil Tapa a picket had been stationed for months, and by virtue of this the Russians had reported the military occupation of Pul-i-Khisti. Officers reconnoitring the Afghan position on the 22d reported to the Russian commander that the Afghans had a picket at Pul-i-Khisti, and were digging trenches on a hillock. Gen. Komaroff's instructions from Prince Dondoukoff-Korsakoff were to carry out an effective occupation of Dash Kepri or Pul-i-Khisti. The Russians made no advance beyond Kizil Tapa. In the parleys between Capt. Yate and Col. Zakrejevsky, when the English officer produced a copy of the telegram containing the agreement of March 17, Col. Zakrejevsky replied, as directed by his commander, that the Russians had no intentions of attacking the Afghans, but, in order to prevent a collision, the latter must withdraw from the posts and intrenchments advanced during the last few days. The Afghans continued to move their posts forward, and on the Russian flank on the left bank of the Kushk to send out numbers of cavalry, and to make fortifications. Gen. Komaroff was impelled by this state of things to make a reconnaissance in force. On the 27th of March, Col. Alikhanoff pushed past the Afghan position at Ak Tapa with a body of cavalry, ascending the left bank of the Kushk to the distance of four miles in the rear of the Afghans. Intercepted there by Afghan cavalry, he retired. The same day a company of Russian infantry reconnoitred the other flank of the Afghans on the right bank of the Murghab. Three Afghan companies went out against them, and threatened to fire if they advanced further. The next day the Afghans occupied a hill commanding the left flank of the Russian camp, where they began to throw up intrenchments and established a post of cavalry behind the Russian line. These manœuvres, which the English officers justified on account of the Russian reconnaissances of the previous day, Gen. Komaroff interpreted as a menace, and an operation which endangered his position. He thereupon sent an energetic summons to the Afghan commander, Naib Salar, giving him till evening to evacuate the left bank of the Kushk and the right bank of the Murghab as far as the mouth of the Kushk. The Afghan officer refused to retire, "acting on the advice of the English."

Gen. Komaroff, after receiving this reply, marched with his detachment against the Afghan position, a movement which he described as a military demonstration, intended to give force to his demand. The Afghans opened fire on the advancing column, and a desperate battle ensued. Although the Afghans fought valiantly, their muskets were useless against breech-loaders, and they were finally driven out of their position, leaving 900 slain on the field, and abandoning their cannon.

Gen. Komaroff's force numbered about 2,000 men. It consisted of two battalions of infantry, half a mountain-battery, and a cavalry column commanded by Col. Alikhanoff, made up of Cossacks, Mervians, Akal Tekkes, and Sariks, under their chiefs. The Afghans numbered 4,300 men, of whom 1,400 were cavalry, with 8 guns. On the Russian side of the Kushk, on a mound in front of the bridge, were 1,200 cavalry, a company of infantry with 4 guns intrenched, to the left of the cavalry, and to the right rear several companies with 3 guns intrenched. The main body of the Afghans was posted in trenches on the opposite side of the Kushk and consisted of about 2,400 men. On the right bank of the Murghab about 200 cavalry guarded the rear against a Sarik attack. On the fortified hill of Aktapa, in the rear of the main position, one or more guns were mounted. Gen. Komaroff's plan was to attack the Afghans on one flank with the cavalry, and on the other with an infantry column, before assailing them in front with the second column of infantry. By an error the cavalry brought up 500 yards in front of the Afghan center, 1,200 yards in advance of the central column. Gen. Komaroff ordered the mountain-guns to advance quickly to the support of the cavalry, and called up all the infantry. The Afghans opened fire on the Cossacks, who had dismounted. The fire was returned by the Cossacks and a few of the Mervians who had rifles. Three hundred Afghan cavalry then descended the mound to charge the Cossacks in the rear. Alikhanoff met this with a rifle-fire of the Cossacks and a counter-charge of the Merve Tekkes. At the same time the other infantry column, who had come up and engaged the intrenched infantry, turned their rifles upon the Afghan horse. The latter gave way, and the whole body of cavalry retreated across the river in disorder. The infantry in the trenches answered feebly to the Russian fire, as the day was rainy and their powder wet. The sharp fusillade thinned their ranks rapidly. Two companies were killed to a man. The Russians finally drove them out at the point of the bayonet. After a stubborn fight, the few Afghan infantry who survived fled over the bridge, leaving three guns behind them. The Russians quickly pursued them across the Kushk, and frustrated an attempt to rally the fugitives and make another stand at the fortified camp. The Afghans were thoroughly demoralized. After a brief resistance the entire Afghan army was in full flight, abandoning guns, tents, and baggage. After the engagement the Russians returned to Kizil Tapa. The Afghans retreated to Maruchak. The Russians reported 1 Turkoman officer killed, 4 officers wounded, and of the rank and file 10 killed and 29 wounded.

The action at Pul-i-Khisti, first known in London on the 7th of April, was generally felt in Europe to constitute a *casus belli*, which the English, in view of their previous declarations and their engagement to the Ameer, would certainly take up. Mr. Gladstone's statement in Parliament that the Russian movement seemed an act of "unprovoked aggression" increased the disquietude. There was almost a panic in London, where consols fell 2½ per cent., and the Continental bourses were depressed in sympathy. M. de Giers begged the English Government not to allow "this regrettable incident" to interfere with the course of negotiations. He published a dispatch from Gen. Komaroff justifying his actions, and explaining that the conflict was brought about by the menacing conduct of the Afghans and was a measure of self-defense. The English ministry deferred pronouncing a definite judgment until the arrival of dispatches from Sir Peter Lumsden. The public excitement soon abated. The Ameer, who was at Rawul Pindi when the news of the Penjdeh fight was brought, disconcerted English diplomacy by declaring that he did not care about the retention of Penjdeh, and would be satisfied with a boundary running through Zulfikar, Akrobat, and Maruchak, which was almost identical with the line for which the Russian Government was contending. He also declared that the advance of an English force through Afghanistan would provoke a rising of the clans, and refused to allow an English engineer officer to enter Herat to report upon its defenses, on the ground that he could not guarantee his safety. The attitude of the Afghans toward their English allies was disclosed to the officers of Sir Peter Lumsden's staff, who were not allowed to approach near enough to Herat to sketch the fortifications from the outside. The abandonment of the Ameer's claim to Penjdeh left room for a compromise. Preliminary arrangements for delimitation on this basis were discussed. Then came dispatches from Sir Peter Lumsden relating to the Penjdeh affair, which again dashed the expectations of a peaceful termination of the difficulty. Capt. Yate's report and Gen. Lumsden's dispatches asserted that the Afghans had not advanced; the taking up of defensive positions was being considered in the nature of an advance, while the Russians drew up almost within range of the Afghan guns and endeavored in various ways to provoke the Afghans to begin the fight; that they had no knowledge of the agreement of March 17, and refused to give assurances that the Afghans would not be attacked without notice. Circumstances seemed to indicate that the Russian war ministry had willfully kept back the agreement of the 17th, and that the untoward event was the result of a deliberate design of the military authorities and Prince Dondoukoff-Korsakoff, the Governor-General of the Caucasus. From Russian dispatches it appeared later that the orders transmitted to Gen. Komaroff were "not to encroach upon Penjdeh," and that this had not been communicated to the subordinate officer who treated with Capt. Yate. The military party in Russia and the Muscovite press began to assume a more defiant and bellicose tone. The acquisition by England of the coaling-station of Port Hamilton, near Vladivostock, and the durbar at Rawul Pindi, were spoken of in the Russian press as constituting a cause of war. The English Government, which had never relaxed its preparations for war, assumed a peremptory tone again, while the attitude of the Russian Foreign Office suddenly stiffened, and imperious replies were returned to English demands. To the English assertion that Afghan outposts existed on the left bank of the Kushk before March 17, M. de Giers replied that the English ambassador assumed the contrary on the 5th of March; that such a circumstance had not been foreseen when the Russian officers were ordered not to advance, and that Gen. Komaroff could not tolerate it, having regard for the safety of his detachment. The same day, April 20, the Russian minister telegraphed: "We are perfectly aware of the gravity of the circumstances, and we share the wish of the English Government to arrive at a friendly understanding; but we could not sacrifice the interests of our dignity for it." The acts of Gen. Komaroff, which the British Government held to be contrary to the agreement of March 17, were the advance of a large force to Kizil Tapa on the 25th of March, reconnaissances on both flanks of the Afghan position, and the ultimatum calling upon the Afghans to retire from the left bank of the Kushk, proceedings which justified the Afghans in strengthening their position at Aktapa, and throwing a force across the river where their outposts had been stationed previous to the agreement.

In answer to the first demand for explanations of the Penjdeh incident, M. de Giers ascribed the collision to the military aspect of Sir Peter Lumsden's Boundary Commission, which encouraged Afghan pretensions. He complained further that English officers had directed the Afghan attack. In the answering dispatch to Sir Edward Thornton at St. Petersburg, Earl Granville denied the latter statement, and declined to admit that the Boundary Commission had any relation to the subject. On the 21st of April came Sir Peter Lumsden's detailed statement. The Government on the Neva declined to submit the Penjdeh affair to further inquiry. Earl Granville then proposed to Baron de Staal, the Russian minister at London, to submit the question to arbitration. The Russian representative thought that his Government would not admit the principle of arbitration, and that, if it did, the only acceptable arbitrator would be the Emperor Wilhelm, who would probably refuse to serve. The British minister expressed satisfaction with the arbitration of the German Emperor, and thought that he would act, if both governments urged it, for the sake of averting a great calamity. On the 26th came a dispatch from Sir Peter Lumsden reporting, on the authority of the Governor of Herat, a Russian advance on Maruchak. This rumor, contradicted three days later, produced intense alarm in England.

On April 27 Mr. Gladstone spoke in the House of Commons in support of the vote of credit for war preparations, announcing the probable withdrawal of the troops from the Soodan to meet the emergency, and declaring that there was abundant cause for preparation:

> I am not called upon to define—and I would find great difficulty in doing so, since it does not stand upon any choice of mine or of my colleagues—the degree of danger that may be before us. We have labored and we continue to labor for an honorable settlement by pacific means; but one thing I will venture to say with regard to that sad contingency of an outbreak of war, a rupture of relations between two great powers like Russia and England—one thing I will say, with great strength of conviction and great earnestness in my endeavor to impress it upon the committee, that we will strive to conduct ourselves to the end of this diplomatic controversy in such a way as that if, unhappily, it is to end in violence or rupture, we may at least be able to challenge the verdict of civilized mankind upon a review of the correspondence, upon a review of the demands and refusals, to say whether we have or whether we have not done all that men could do, by every just and honorable effort, to prevent the plunging of two such countries, with all the millions that own their sway, into bloodshed and strife.

He spoke of the delimitation plan as frustrated to the extent that it had not been carried into effect, and pointed out that the delay "allowed for military advances upon debated ground that were obviously and on the face of them in a high degree dangerous to peace and dangerous to the future settlement of the question." This danger the ministry sought to neutralize by the agreement of the 16th of March, usually described under the date of the 17th, when it was telegraphed to Sir Peter Lumsden, which he characterized as a "very solemn covenant, involving great issues":

> There were thousands of men, on the one side standing for their country and on the other side for what they thought their patriotic duty, placed in a position of dangerous contiguity and in danger of bloody collision. This engagement came between the danger and the people exposed to it, and we believed that it would be recognized as one of the most sacred covenants ever made between two great nations, and that there would be a rivalry between the two powers to sift the incident that followed to the end, and how it had come about, and who and where were the persons upon whom the responsibility rested. All this, sir, remains in suspense. What happened? The bloody engagement of the 30th of March followed the covenant. I shall overstate nothing—I shall not purposely overstate anything. All I say is this, that that woful engagement of the 30th of March distinctly showed that one party or both had either through ill-will or through unfortunate mishap failed to fulfill the conditions of the engagement. We considered, and we consider it still, to be the duty of both countries—and, above all, I will say for the honor of both countries—to examine how and by whose fault this calamity came about. I will have no foregone conclusion; I will not anticipate that we are in the right, and although I have perfect confidence in the honor and intelligence of our officers, I will not now assume that they may not have been misled. I will prepare myself for the issue, and I will abide by it as far as I can in a spirit of impartiality. What I say is that those who have caused such an engagement to fail ought to become known to their own Government and to every contracting party. I will not say that we are even now in possession of all the facts of the case, but we are in possession of facts which create in our minds impressions unfavorable to the conduct of some of those who form the other party to these negotiations. But I will not deviate from the strictest principle of justice in anticipating anything of the ultimate issue of that fair inquiry which we desire to prosecute and are endeavoring to prosecute. The cause of that deplorable collision may be uncertain. Whose was the provocation is a matter of the utmost consequence. We know that the attack was a Russian attack; we know that the Afghans suffered in life, in spirit, and in repute; we know that a blow was struck at the credit and authority of a sovereign, our protected ally, who had committed no offense. All I say, sir, is that we can not, in that state of things, close this book and say, We will look into it no more.

The question of arbitration was submitted to the Russian Emperor, and his reply was telegraphed April 28. He refused to admit anything like an inquiry into the acts of Gen. Komaroff, as he considered himself the sole judge of their conformity with his orders; the only misunderstanding that could exist was between the two governments. The Russian Government considered that it had been quite faithful to its promises; but if any question of dignity prevented the direct settlement of the matter and the close of the incidental discussion, so that they could resume the boundary negotiations, then the Czar reserved to himself to consider the question of arbitration. On the 30th of April, M. de Giers then proposed to neutralize the Penjdeh district pending discussion, and resume the frontier negotiations. Earl Granville stipulated that both Russian and Afghan troops should retire from the district, and on May 4 agreed to resume negotiations and to submit the Penjdeh dispute to arbitration if the two governments could not harmonize their views. The case for arbitration was now so narrowed as to deprive the award if made of all significance. On the 4th of May was telegraphed the acceptance by the English Government of the arrangement agreed to by the Czar, "that in respect to any misunderstanding that may have arisen in the interpretation of the agreement between the two Cabinets, if there shall still be found to subsist doubts and divergences of appreciation, the case shall be referred to the judgment of a sovereign enjoying the confidence of the two governments." When the arbitration of the Emperor Wilhelm was found to be impracticable, the two Cabinets agreed to submit the question to the decision of the King of Denmark; but finally the subject was suffered to drop out of sight.

The British boundary commissioners, who expected war to be declared every instant, found their occupation gone when boundary negotiations were renewed in London, May 4. Sir Peter Lumsden was recalled to London, and the main body of the commission was dispersed and sent back to India. Col. Ridgway with a small escort, and the surveying officers Colonels Yate and Peacock, remained so as to enable the commission, reduced to the dimensions desired by Russia, to begin operations as soon as the main features of the boundary should be settled upon by the two Cabinets. Mr. Gladstone took pains to explain that the recall of Gen. Lumsden involved no rebuke or displeasure. The general impression was that the commissioner himself was dissatisfied and asked to be relieved. Decorations and promotions were bestowed upon the officers of the expedition, partly as an answer to the action of the Russian authorities, who, instead of disavowing the proceedings of Komaroff and Alikhanoff, as was demanded by the British Government, sent them decorative orders and messages of praise. Lord Granville's dispatch of May 4, which accepted the Russian compromise and closed the incident, smoothed over the bitter charges of bad faith that were bandied back and forth with the avowal that "it has at no time been the desire of her Majesty's Government to see gallant officers on either side put upon their trial."

The Durbar at Rawul Pindi.—One of Lord Dufferin's strokes of policy was to arrange a conference with the Ameer in order to strengthen and draw closer the relations between the Afghan monarch and the Indian Government by a modification of the existing compact. In the durbar with Lord Mayo at Umballa in 1869 Shere Ali asked for a treaty of protection, a fixed subsidy, and a dynastic pledge. Failing to obtain a definite arrangement, he was eventually drawn into the Russian alliance. Since then Abdurrahman had received a promise of protection which, on the principle that "the yea and nay of a viceroy is equal to the most formal treaty," was looked upon as binding. He had also a regular subsidy. The Russian Government expressed dissatisfaction at the durbar arranged by Lord Dufferin. In Russia the opinion was held that a new arrangement between Great Britain and the Ameer would abrogate the frontier convention of 1873.

Abdurrahman Khan met Lord Dufferin at Rawul Pindi in the independent Punjaub, near the Afghan border, on the 31st of March. He was received with great ceremony. The Duke of Connaught was present and called upon the Ameer with the Viceroy so as to impress upon him the fact that he was regarded as an equal and not as a vassal. A parade of 8,000 imperial troops and of 3,000 soldiers of the native chiefs gave him a high opinion of the strength and efficiency of the Indian army. A jeweled sword presented him by the Viceroy he declared would be used against the enemies of the British Government. The Indian Government gave him a mountain-battery, a heavy gun, 5,000 Snyder rifles, and other presents. The grand durbar was held April 8. The Ameer in a formal speech announced his willingness to render with his army and his people any services that might be required of him or of the Afghan nation. "As the British Government," he said, "has declared that it will assist me in repelling any foreign enemy, so it is right that Afghanistan should firmly unite and stand side by side with the British Government."

Among the new arrangements arrived at in the conference was the final agreement of Abdurrahman to receive an English envoy in Cabul. The British representative, Mirza Ataullah Khan, proceeded to Cabul in August. The Ameer's request for more arms and money was acceded to, and his annual subsidy was raised.

Preparations for War.—Russia re-enforced her garrisons in Turkomania, and advanced her pickets to Pul-i-Khatum and Yolatan simultaneously with the arrival of the British Boundary Commission. The presence of Indian troops on the frontier was alleged as the cause of strengthening the Russian position in the Turkoman country. The advance of Russia to Sarakhs and the Murghab, and the extension of the Transcaspian Railroad to Askabad, gave the first impulse to a concentration of Indian troops on the Afghan border. The English Government was persuaded to authorize the construction of the Sibi-Quetta Railroad, partly laid by the Disraeli Government, but torn up in pursuance of the "backward" policy, and its extension to the Pishin valley. Quetta became a busy British residence, the center of a military district, and the headquarters of a division of the Indian army. Under cover of the railroad works troops were massed in the Bolan Pass and the Quetta district, to build and guard the line about the time when the Boundary Commission set out for Herat. The military district of Quetta includes the Bolan Pass and some places east of it, as well as the Pishin valley. Before the Zhob valley expedition the forces stationed in the district were 3,039 British infantry, three batteries of British artillery with 328 men, 11,016 native infantry, 624 native cavalry, and one native battery with 168 men, a total of 15,175 men with 22 guns. After the Zhob valley expedition the 5,673 men composing it were distributed in the Quetta command and in Sinde. A considerable portion of this army of more than 20,000 troops, with 32 guns, was stationed in the Pishin valley, 30 miles beyond Quetta, while at Quetta there were garrisoned 7,000 men. In Sinde there were 6,138 men and 12 guns. Another enormous garrison was maintained in the Punjaub, principally at Peshawer, near the entrance of the Khyber Pass.

There were no open and menacing preparations until after the arrival of the British commissioners on the Afghan frontier, when the Cossacks advanced to Zulfikar and Akrobat, and Gen. Komaroff's detachment threatened Penjdeh, and when the English officers encouraged the Afghans to advance their outposts to the same line, and resist every further encroachment, sending home at the same time startling accounts of Russian acts of defiance and aggression. The English demand for withdrawal from the debatable zone had been met by a further advance, and the English ministers were in doubt as to whether it was a question of 50 versts of sand and pasture-land, with a few thousand Turkomans, or of the seizure of the "gateway of India." The hotheaded officers on either side were likely to provoke a collision at any time. A warlike spirit was roused in England and India, and was shared by the military and Anglo-Indian authorities. The sentiments of the Ameer, who was shortly to meet the Viceroy, were not known; and, to preserve his confidence and loyalty, the British Cabinet were ready to go to war. To show the Czar, the Ameer, and the Indian people that they would not shrink from the defense of British interests, they began to mobilize when reports came that Komaroff was threatening Penjdeh after the March agreement. Lord Dufferin, when on the way to Rawul Pindi, ordered 50,000 men to take the field under the command of Sir Donald Stewart. The force, composed of the *élite* of the Anglo-Indian army, was divided into two army corps, commanded respectively by Generals Hardinge and Sir Frederick Roberts. Lord Hartington provided, in the supplementary army estimates, for the immediate increase of the English army by 15,000 men, to bring up the regular army, weakened by the Egyptian operations, to its normal strength. On the same day, March 26, the British army and militia reserves were called out by royal proclamation. There were about 40,000 available men in the regular army reserve, and 30,000 in the militia reserve, to enable the places of the two army corps, and a reserve division of 10,000 men, also mobilized, to be supplied by fresh English troops. There were already on the Afghan frontier nearly enough men to form the first army corps, the troops in the Quetta and Pishin district numbering about 20,000, and in Sinde 6,000 more. Arrangements were made for sending 15,000 men from England at once to India. The vote of credit for £11,000,000 was asked for a few days before the settlement of the Penjdeh question, on May 4. The Conservatives accused the ministry afterward of threatening war against Russia merely to cover their retreat from the Soodan, and to obtain the money to pay the losses of the Nile expedition by combining the account with a vote for military preparations.

The naval authorities had long been busy in the dock-yards preparing for the emergency—coaling the reserve fleet, overhauling the torpedo-boats, and pushing forward the work of construction and equipment. Orders were now received to prepare for service the ships of the first reserve and ships under construction that could be speedily got ready. The naval and military arsenals, and the private manufactories of arms and stores, were set in operation to the extent of their productive capacity. The procrastination and delay of the Naval Board with reference to breech-loading guns, and other neglected matters, came to an end. The War Office likewise showed an unwonted and feverish activity. Before the end of March a number of the fastest steamships of the Cunard, National, and Guion lines were leased by the Government on contracts running to Sept. 1, with the option of purchase.

The most effective war measure that England could take in Central Asia was the extension of the strategic railroad. It was expected that it could be completed to Quetta by September, 1885, but the natural gradients were found to be too steep between Sir-i-Bolan and Darawaza, so that it could not be completed for two years. A military road had been made through the Bolan Pass before the concentration of troops at Quetta, but, owing to the lack of bridges, a field railroad could not be laid, and mules had to be relied on for transport. Work was begun on a temporary railroad along the bed of the Bolan river, and by the old road to Sir-i-Bolan, and then, beyond the break in the upper pass, from Darawaza to Quetta. This was the route graded under the Conservative Administration. The embankments were now to a great extent washed away. Work was pushed forward also on the Harnai route. Cholera soon broke out in the camps, necessitating the cessation of operations on the Harnai line below the Chappar rift and on the lower sections of the Bolan line, and the removal of the men to the mountains until September, to work on the summit sections. Beyond Quetta the road was completed for thirty miles by the end of July.

During the period of extreme tension in April and May, English cruisers followed Russian men-of-war in all their movements. In American waters the Garnet shadowed closely the Russian Strelok. The Russian admiral commanding the squadron in the China seas, when followed into Yokohama by three British ships, prepared for action, and brought his guns to bear, explaining to the British flag-captain, who questioned him as to his strange conduct, that the persistency with which British ships followed the vessels of his fleet led him to suspect some sinister design.

As announced in the debate on the vote of credit, the Khartoum expedition planned for the autumn was countermanded, and the withdrawal of the forces in the Soodan was in progress. The Indian troops at Suakin were ordered home. The Australian contingent in the Soodan was offered for service in Afghanistan if necessary by the Government of New South Wales. Other colonies made like offers. Fortifications at Hong-Kong, Singapore, and other naval ports were enlarged and improved, and coal stored at the coaling-stations. A new coaling-station, Port Hamilton, was occupied in the China seas, within a few hundred miles of Vladivostock. The inhabitants of British Columbia began to fortify their own ports, and the people of Hong-Kong and Singapore bore the principal part of the costs of fortification.

The Hindoos manifested generally a spirit of devoted loyalty. The native papers, which a few months before were loud in complaints of British oppression, and scarcely veiled their revolutionary sentiments, now vied with the London press in bellicose expressions. Wealthy nobles offered their property to the Government for the object of repelling invasion. The feudatory sovereigns, whose overgrown armaments were the subject of a scare in England the year before, placed troops and money at the disposal of the imperial authorities. The Nepaulese Government called out and drilled 12,000 Goorkas, and proffered their service. The Maharajah of Mysore equipped a regiment of cavalry, and offered to supply bullocks and to contribute to the extent of the whole resources of his state. The Nawab of Moorshedabad sold his family jewels in order to place two lacs of rupees at the disposal of the Government. The Nawab Ahsumoolla Khan, of Dacca, sold all his personal property, and proffered the eight lacs that it realized. The Maharajah of Tipperah, another of the prominent Mohammedans of Bengal, offered to contribute the proceeds of his entire estate. The heads of all the most important Mohammedan and Hindoo native states made formal tenders of service at the Rawul Pindi Durbar. The ruler of Cashmere placed his entire resources at the disposal of the Viceroy. Similar offers were made by the Rajput chiefs of Oodeypoor, Jeypoor, Jodhpoor, Ulwar, Dholapore, Kotah, and Bikaneer; the Punjaub chiefs of Puttiala, Bhawalpore, Nabha, and Jhind; the great Mohammedan chiefs Scindia and Holkar of central India, those of Bhopal, Rewah, Dhan, Oorcha, Punna, Rutlam, and Jowra, and the Nizam of Hyderabad, who was represented at the durbar, and offered to furnish troops for operations on the Afghan frontier.

Russian Relations with Persia.—Simultaneously with her advance to the frontier of Afghanistan Russia has betrayed an inclination to secure a new "rectification" of the Persian frontier which would give her a portion of the fertile lands in the eastern portion of the Shah's dominions, and greatly improve her military, political, and commercial position, especially in relation to Herat. It is possible to improve the Russian communications and means of subsistence in this quarter by irrigating the desert; but that object can be accomplished still better by annexing a part of Khorassan. Since the inclosure of Persia on the east as well as on the north and northwest by the Russian dominions, the Shah is entirely at the mercy of the Czar. Difficulties between the Persian Government and Yomut Turkomans immigrated from Russian territory led recently to complaints from St. Petersburg, and overtures for the cession of Astrabad Bay and the Attrek valley, controlling the route from the Caspian to Meshed. Russia is said to have made offers for the purchase of the sacred city of Meshed, the possession of which would give her a great influence in the Mohammedan world as well as another commercial and military route to Herat and central Asia, and a wide section of productive country. The Khorassanis are prepared, if not eager, for Russian annexation, detesting as they do the Kajur dynasty. A petition to the White Czar to that effect was lately circulated among them, receiving 10,000 signatures. When the Russians moved upon Merv, the Zill-es-Sultan, Governor of southern Persia at Ispahan, who is the favorite son of the Shah, the most likely successor to the throne, and the most efficient administrator in Persia, went to Teheran in the hope of obtaining the ministry of war, and of carrying out a plan for an English alliance against Russia. To conciliate England, Ayub Khan, the pretender whom Russia may help to the throne of Cabul, was arrested near the Afghan border and imprisoned, while an Anglophile official was made Minister for Foreign Affairs. The condition for the transfer of the Shah's sympathies to England was the realization of Nassr-ed-Din's old dream of the annexation of Herat. To this the English Government would not listen, so the plan fell through, and the war office was given to another son of the Shah, the Naïb-es-Sultaneh, a friend of Russia, who brought to the avaricious monarch a gift of 250,000 tomans, supplied according to Persian rumors from the Russian Exchequer. In July, 1884, while the arrangements for the delimitation of the Afghan frontier were in progress, Yahya Khan, a relative of the Shah and a high officer of state, the Mushir-ed-Dowleh, was dispatched to St. Petersburg on a secret mission. The Shah is said to have conceded to Russia the privilege, in the event of an English war, of occupying and garrisoning the Persian frontier south of

Sarakhs along the Heri Rud as far as Kiafir Kaleh, the point where the Meshed-Herat road crosses the frontier line.

The Attitude of other Powers.—The English speculated on a wide-spread disaffection in Russia which would cripple the empire in the event of war. If they could land in Georgia, they expected that a rising of the whole Caucasus would take place, and the Russian communications with Asia would be broken. The Turkomans were represented as embittered by oppression, or easily to be bought off from their allegiance. Turkey they looked upon as their necessary ally. Austria was counted upon for a diversion in the Balkan principalities, while the Magyars were thought to be eager to seize upon Poland and to strike a blow at Russia out of revenge for old wrongs. The existing coolness with Germany and her rigidly pacific policy gave them no expectation of assistance from her, but rather of efforts to avert or circumscribe the conflict. The large German interest in Russian loans rendered such efforts the more probable. The financial embarrassments of Russia were supposed to be so great as to deprive her perhaps of the means, and certainly of the will, to carry on a great war. The Russians held as slight an opinion of the ability of the English to engage in the struggle, owing to the smallness of their army and the backward state of their armaments. Against an immediate conflict on the Afghan frontier they felt secure, and thought that, before that could come, Afghanistan would go to pieces and the richest provinces of the country fall under Russian sway. Though the Afghan ruler was controlled by English influences, or rather paid to keep quiet, Russia might again acquire the ascendency she had in the times of Dost Mohammed and Shere Ali. Assertions were repeatedly made by Russian officials and publicists that Abdurrahman was playing a double game. The English counted further that China would ally herself with England in order to save Corea from invasion and the seizure of her harbors for a Russian naval base, and to recover Mantchooria.

The Russian position in the controversy received actually the moral support of the Austro-German alliance. Confident of this support, the Russian Cabinet could afford to disregard the warlike threats of England, and maintain firmly the ground taken in the boundary dispute. Evidence transpired that the German Chancellor was taking measures to prevent an immediate conflict. However little Germany might object to the northern Colossus that hemmed her growth in eastern Europe and the arrogant naval power that thwarted her aspirations over seas wasting their energies in a localized conflict in central Asia, she could not suffer the torch of war to be kindled in Europe. If Germany and Austria, according to their apparent intention, compelled Turkey to keep the Dardanelles closed against the English fleet, Great Britain could nowhere reach her antagonist to deliver a telling blow. The whole case of the English depended on the delusive figment of a "strong, united, and friendly Afghanistan." To attempt to march an army to the northern frontier of Afghanistan to battle for the neutralization of the disputed strip of country, was out of the question. The reconquest and thorough subjugation of the Afghans would be first necessary. Such an attempt would enable Russia to absorb the subject races of northern Afghanistan without a struggle, and fix the boundary along the Hindoo-Koosh, including whatever strategical positions she chose to possess herself of, if it did not drive the Afghans into the arms of Russia and enable her to chase the English across the Suleiman range and carry the war into India "under the banner of plunder and carnage, after the manner of Tamerlane." The false and helpless position into which English diplomacy was betrayed gave the British side of the controversy the appearance of hypocritical bluster intended mainly to impress the Ameer and the people of India.

It was reported that the German and Austrian ambassadors informed the Porte in April that, if Turkey allowed either the British or the Russian fleet to pass the Dardanelles, the Treaty of Berlin would *eo ipso* be annulled, and that Germany and Austria would consider themselves free from every engagement. They declared further that the Porte would have to make its neutrality respected by its own resources, and that the result would be the same if either belligerent forced the passage of the Dardanelles.

The Swedish Government began to arm its fleet and to construct batteries for the purpose of preventing England from establishing a coaling-station in Gotland. The Baltic powers were expected to unite in enforcing the neutrality of the sound. The Porte provided against eventualities by fortifying Kars and ordering arms and ammunition.

While England and India were stirred with war preparations, preliminary arrangements for mobilization were quietly made in Russia. The Russian press contemptuously characterized the feverish preparations of Great Britain as childish threats. Since the beginning of the year only a slight movement of troops had taken place, principally from Turkistan to the Afghan frontier. A few battalions only had crossed the Caspian. The force on the Afghan frontier in May was reported as follows: In Khaka, 100 infantry, 400 cavalry, and 3 guns; at Surakhs, 300 infantry, 400 cavalry, and 3 guns; at Pul-i-Khatum, 200 infantry and 100 cavalry; at Kushid Kala, 2,020 infantry, 800 cavalry, and 4 guns; between Kushid Kala and Merv, 2,060 infantry, 600 cavalry, and 4 guns; near Penjdeh, 1,200 infantry, 800 cavalry, and 4 guns; at Zulfikar, 400 infantry; and at Akrobat, 200 cavalry.

After the Penjdeh incident war preparations proceeded with greater haste. Two divisions were forwarded to Turkistan. The enormous force, in the neighborhood of 100,000 men, already stationed in the Caucasus, was increased. Redoubts were made at Batoum. At Cronstadt orders were received about the middle of April to have 40 war-ships and 20 torpedo-boats made ready for immediate service. Troops and stores were sent out to Vladivostock. Before the middle of April the Cossack reserves were called out, which is the first step toward placing the Army of the Caucasus on a war footing.

The army in Turkistan numbered nearly 70,000 men, including the Cossacks colonized in Zerafshan and on the Narym. The main forces were collected in the Ferghana district, with headquarters at Marghilan, and in the Zerafshan district with Samarcand for its center. In the first there were 12,000 men, and in the other from 12,000 to 15,000. The Amu Darya district was garrisoned by from 4,000 to 5,000 men. These forces, which would operate in the region of the Oxus, and possibly descend into India near Jassin by a new route across the Pamir, could be recruited from Tashkend and the line of the Syr Darya, and ultimately from Orenburg and western Siberia. The Turkistan army was under the command of Gen. Rosenbach. Gen. Komaroff's army numbered about 6,000 men, including the newly enlisted Turkomans, and had to depend upon the Caucasus for re-enforcements.

At the beginning of the year the terminus of the Transcaspian Railway was still at Kizil Arvat, 146 miles from Michaelovsk, the starting-point. The road was graded nearly to Askabad by the middle of May, and the track was laid as far as Bami, 35 miles east of Kizil Arvat. For the rest of the line the rails were still at St. Petersburg. The rolling-stock was very deficient, but an additional supply was being made at Dantzic. The road was completed to Askabad by about the 1st of October.

The Boundary Negotiations.—The Russian Government insisted from the beginning that the basis of the delimitation should be settled by direct negotiations between the two cabinets. The English Government, on the other hand, not having at command the necessary topographical information, sought to invest the Frontier Commission with the fullest possible dignity and power. The Russian Cabinet was determined to make good its claims to the lands of the Turkomans, while the Anglo-Indian authorities were disposed to contest those claims, as was shown by the Afghan occupation of Penjdeh. If the Russians had sent an ostentatious commission, attended by a small army, such as the Indian and military authorities had persuaded the British Government to send as Sir Peter Lumsden's escort, a wrangle over disputed points between the commissioners might lead to a collision between British and Russian troops and precipitate a war. Therefore the Russian Government, protesting that an unostentatious technical commission was intended, did not send Gen. Zelenoy to meet Sir Peter Lumsden, but laid their territorial claims before the London Government, while the Cossacks quietly occupied the country claimed. M. Lessar, an engineer of French birth, who had explored the frontier region with reference to railroad routes, was sent to London in the beginning of February, to assist in the negotiations between Earl Granville and Baron de Staal. The main point of the Russian contention was that the frontier line should be an ethnographical one, and that it should assign to Russia the Turkoman tribes that had recently acknowledged Russian sovereignty, and all the lands possessed by them. The line along the crest of the Barkhut and Paropamisus mountains, from the Heri Rud to the head-waters of the Kushk, was proposed as a suitable one from the ethnical point of view, and also in a geographical and in a strategical sense. The country to the north of it had been reclaimed from predatory violence and rendered available for peaceful colonization by Russian arms. The argument that a part of it once belonged to Herat was balanced by historical claims based on the ancient extension of the dominion of Merv. The alarm and hostility created in England by the Russian advance, and the angry demand that the Russian outposts should retire from the debated zone, led M. de Giers to offer as a concession, in the beginning of March, that the line should not follow the physical frontier of the Borkhut mountains, but should be drawn farther north in such a way as to include in the Russian dominion the pasture-lands of the Salors, the salt lakes of Ni Maksar, which furnish the Turkomans with their salt-supply and their only export article, and the oasis of Penjdeh. This line, propounded by M. Lessar, coincided with the line of Cossack posts, which had been advanced to guard the Salor pasturages and the salt lakes, except at Penjdeh, then held by Afghan troops. Since the arrival of Sir Peter Lumsden the Afghans also had advanced into the debatable zone. They confronted the Russians at Zulfikar, occupied the northern entrances of the Borkhut passes, and had crossed the Kushk at Penjdeh. The expulsion of the Afghans from Penjdeh gave the Russians military possession of every district claimed. The attitude of the Ameer Abdurrahman and the feeling of the powers of Europe forced England to give up every thought of declaring war.

On the 13th of April Lord Granville proposed that, in order to avoid the repetition of regrettable occurrences such as that of the 30th of March, the Russian troops should withdraw from the disputed territory, the English Government undertaking on their part to prevent the return of any Afghan force to the debatable land, and that the Russian commissioners should proceed to the spot and the joint commission begin operations at once; that the commission should be guided by the political relations of the tribes occupying the country, and avoid imposing upon the Ameer obligations that he would be unwilling or unable to fulfill; and that any difference arising between the commissioners should be referred to their respective governments. M. de Staal made a condition that the line proposed on January 28 should be the basis of delimitation. M. de Giers, in his answer, declined to withdraw Russian troops, but would consent to the retirement of the outposts from any locality during the examination of the ground by the commissioners, attended by escorts limited to one hundred men, and proposed that, as delimitation progressed, each side should be bound to establish posts and maintain order along the frontier. The British Government desired to obtain from Russia a treaty recognizing the boundary now to be agreed upon as a perpetual and inviolable limit to Russian operations. The Russians declared that they wished to obtain as permanent and secure a frontier as possible, as was evinced by their contention for an ethnographic boundary, and for the indivisibility of the tribes. Their object in asking for a delimitation was to establish settled order in their Turkomanian possessions, and guard against border troubles with the Afghans. In view of the evanescent and fictitious nature of the English protectorate over Afghanistan, the troubled and unstable condition of the Afghan state, and the quarrelsome and aggressive temperament of the Afghan people, they naturally declined to assign so sacred a character to a paper boundary. To the English demand M. Lessar responded with the query, "Who will answer for the Afghans?"

Negotiations were resumed in May. The English Cabinet showed a willingness to accept the *fait accompli*, and give Penjdeh to Russia. The concession was less difficult after the Ameer's voluntary renunciation of the position. They demanded that by way of compensation Zulfikar should be secured to the Ameer.

Much indignation was felt in England at this compromise, which gave up the whole debated zone, and practically accepted the Lessar boundary that was rejected in March, without any requital for the blow to British prestige and honor received at Penjdeh.

The Russian reply, received May 29, agreed to the proposal to leave to the Ameer Zulfikar and Maruchak at the southern extremity of the Penjdeh oasis. The pass of Zulfikar is double, one entrance giving access from Persia, by a ford across the Heri Rud, and the other from the Salor country to a valley that leads into the plains north of the Borkhut mountains. The English demand was not justified by strong strategical considerations, but had its motive principally in a desire for an *amende* from Russia, such as would be implied in the abandonment of a post already occupied by the Cossacks. Military circles in Russia now became indignant in turn at the slight concession required as a salve for British honor. They obtained the ear of the Czar, who declared that positions occupied by his troops should not be surrendered. In demanding Zulfikar the English ministry took the precaution to obtain the approval of the Ameer, and thus provide against another discomfiture like his disavowal of their claim of Penjdeh. They

JUNCTION OF MURGHAB AND KUSHK RIVERS—AK-TAPA IN THE DISTANCE.

were therefore in the position to declare that England was pledged to secure Zulfikar for the Ameer. The Russian minister, obedient to the dominant sentiment, endeavored now to minimize the concession to which he had consented in principle, that the line should be drawn on the Heri Rud, "at a point north of Zulfikar."

The question as to the extension of the territory to be conceded was scarcely raised when the Liberal Government in England went out of office. The anti-Russian speeches of Lord Salisbury before taking office, in conjunction with the choice of so pronounced a Russophobe as Lord Randolph Churchill as the head of the India Office, led the Russians to anticipate a vigorous and militant policy that would overturn the basis for a friendly understanding already attained. The Marquis of Salisbury quieted the general fear by his statement in Parliament that, as he found the business in the process of settlement, it became the duty of the new Government "to take up the policy where it had been left, and to conduct it to such an issue as seemed consistent with the public interest." He laid down as a "dominant condition" of his policy that the pledges given by the outgoing Government should be fulfilled. The Tory Government insisted, however, on the largest construction of the terms of the Russian engagement with reference to Zulfikar. The line proposed started at the Heri Rud, north of the pass, taking in the defile leading from Persia Afghan, as well as the pasture-lands along the river that go by the name of Zulfikar, but leaving to Russia the interior valley and the other defile, besides other positions in dangerous proximity to the wells and salt lakes of their new possessions, that were claimed by England for the Ameer. To give up these, they declared, would be surrendering "the key to Russia's house." The nearest road from Akrobat to the wells of Mulla Hairan Taka, and the pasturages of the surrounding valley, lies through the country claimed by England. M. de Giers distinctly refused to concede this portion of the disputed territory in the preliminary negotiations that preceded the agreement to abandon Zulfikar. Russia offered to allow the matter to be settled by the commissioners on the spot, but the proposal was rejected. In the beginning of July the Afghans began to mass troops again on the border. The Russians thereupon advanced in force to Zulfikar. The British boundary commissioners retired to Herat, and were now invited into the city by the Afghans. Since the Ameer's return from India his troops had been at work improving the fortifications. The assistance of English engineer officers was now accepted. Lord Salisbury demanded that the Russian troops should be withdrawn from the advanced positions in the Zulfikar Pass pending negotiations. Russia agreed, on the condition that the Afghans should not occupy the positions evacuated. The discussion over Zulfikar was finally brought to a termination in the beginning of September by a compromise. The Russian Government, after making topographical inquiries, considerably modified their position, abandoning to the Ameer the whole of Zulfikar Pass proper.

ALABAMA. State Government.—The following were the State officers during the year: Governor, Edward A. O'Neal, Democrat; Secretary of State, Ellis Phelan; Treasurer, Frederick H. Smith; Auditor, M. C. Burke; Attorney-General, Thomas N. McClellan; Superintendent of Education, Solomon Palmer; Railroad Commissioners, Henry R. Shorter, L. W. Lawler, and W. C. Tunstall; Commissioner of Agriculture, E. C. Betts. Judiciary, Supreme Court: Chief-Justice, George W. Stone; Associate Justices, H. M. Somerville and David Clopton.

Legislative Session.—The Legislature, which was in session at the close of the year, adjourned in February. Among its notable achievements were the defeat of the restrictive railroad bills and the reduction of the tax-rate from six and a half to six mills. The road laws, founded on a social and economic condition whose base was African slavery, have been proved ineffectual under a system of free labor. These laws are left as they were, except in some counties where the people clamored loudly for a change.

A law was passed providing for instruction of all pupils in all schools and colleges supported in whole or in part by public money, or under State control, in hygiene and physiology, with special reference to the effects of alcoholic drinks, stimulants, and narcotics upon the human system.

Another law modifies the common-law liability of employers to their workmen, in cases of death or injury resulting from carelessness or defective materials or faulty construction.

Other acts of the session are the following:

For repairing the buildings at Talladega, known as the Alabama Institution for the Deaf and Dumb and the Blind.

To prevent public drunkenness.

For the revision and codification of the public statutes of this State, both civil and criminal.

For the appointment of inspectors of timber and lumber.

To amend an act to amend an act to revive and complete the geological and agricultural survey of the State, approved Feb. 19, 1883.

To authorize the Governor to employ an expert accountant to act as examiner of public accounts and to define his duties.

Further to define and regulate the convict system of Alabama.

For the sale of such lands as have been or may be selected under and by virtue of an act of Congress entitled "An act to increase the endowment of the University of Alabama from the public lands in said State," approved April 23, 1884; and for the application of all moneys arising from such sales.

To authorize the Alabama State Bar Association to institute and prosecute proceedings to disbar practicing attorneys.

To allow the oral examination of witnesses in courts of chancery.

To prescribe a uniform mode of executing conveyances of lands and of every interest therein.

Allowing parents or personal representative of a minor child to sue a person or corporation for a wrongful act or omission causing any personal injury to or death of such minor.

To increase the facilities for instruction and for the treatment of the pupils of the Alabama Institute for the Deaf and Dumb and the Blind.

To provide for the payment of the interest on the State debt payable outside of the State.

To authorize the State Treasurer to dispose of certain uncurrent funds now in the treasury.

To prevent the violation or evasion of prohibitory laws, and of the laws requiring license to sell spirituous, vinous, or malt liquors.

To set apart to widows and minors the property exempt from administration and debts under the laws of Alabama without any administration thereon.

To provide the manner in which corporations and non-residents must give security for costs when suing in this State.

To make an appropriation for the enlargement of the Capitol, and to furnish the same.

To divide the State into nine judicial circuits, and to fix the times and places of holding courts therein.

For the substitution of lost or destroyed indictments.

For the assessment and collection of taxes for the use of this State and the counties thereof, and to define the duties of officers engaged about the said assessment and collection of taxes.

To amend an act to establish a Department of Agriculture for the State.

To amend section 1 of an act to give landlords of store-houses, dwelling-houses, and other buildings, a lien on the goods of their tenants for rent.

To amend an act to permit defendants to make statements in their own behalf in all trials of indictments, complaints, or other criminal proceedings.

An act to protect and encourage industry within the State of Alabama declares that—

> Any person who shall, by force or threats of violence to person or property, prevent or seek to prevent any person from doing work or furnishing materials, for or from contracting to do work, or furnish materials to any person, firm, or corporation engaged in any lawful business, or who shall in like manner disturb, interfere with, or prevent or attempt to disturb, interfere with or prevent the peaceable exercise of any lawful industry, business, or calling, by any other person within the State of Alabama, shall be guilty of a misdemeanor and on conviction must be fined not less than $10, nor more than $500, and may also be imprisoned in the county jail or sentenced to hard labor for the county for not more than twelve months.

An act was passed to submit to the people of the State at the general election to be held on the first Monday in August, 1886, an amendment to section 7, Article XI, of the Constitution, providing a special tax of one fourth of one per cent. for the city of Birmingham to be applied to the payment of interest on the bonds of said city, and for a sinking fund to pay off said bonds at the maturity thereof.

At the same time there is to be submitted a proposition amending section 5 of Article XI of the Constitution, so as to read as follows (amendment in italics):

> SECTION 5. No county in this State shall be authorized to levy a larger rate of taxation in any one year, on the value of the taxable property therein, than one half of one per centum:
>
> *Provided*, That to pay debts existing at the ratification of this Constitution an additional rate of one fourth of one per centum may be levied and collected, which shall be exclusively appropriated to the payment of such debts, or the interest thereon.
>
> *Provided further*, That to pay any debt or liability now existing against any county, incurred for the erection of the necessary buildings or other ordinary county purposes, or that may hereafter be created for the erection of necessary public buildings, or bridges, *or for the construction or improvement of public roads*, any county may levy and collect such special taxes as may have been or may hereafter be authorized by law, *such tax when levied for the improvement or construction of public roads not to exceed one half of one per centum in any one year*, which taxes so levied and collected shall be applied exclusively to the purposes for which the same shall have been levied and collected.

The entire number of acts, memorials, and joint resolutions passed by the Legislature and approved was 450. The number of the session of 1882–'83 was 358.

Crime.—The number of convictions in the State during 1883 was 2,812; the number of acquittals, 1,265; the number of *nol. pros.*, etc., 1,296; the number of prosecutions, 5,373. The predominant crimes were assault and battery, and grand larceny. During 1884, the convictions were 3,210; acquittals, 1,376; *nol. pros.*, etc., 1,645; prosecutions, 6,231. The predominant crime was concealed weapons. Eleven counties are not included in the report for 1883, and fourteen for 1884. The death-penalty was inflicted only once in 1883, and in 1884 ten times. The crimes that merited this punishment are rape and murder.

Relative to the carrying of concealed weapons, a journal of the State says:

> It would thus seem that the law is powerless to suppress a practice that does so much harm and no good. The trouble about the crime is, that the carrying of concealed weapons is sustained by public sentiment, and to be convicted of the offense carries with it no opprobrium whatever. There is no lack of duty performed on the part of the law officers.

The same journal says respecting the death-penalty:

> This startling increase is by no sort of means an indication that capital crimes are on the increase among us. It simply goes to show that the lynchings which were so horribly frequent in 1882 and 1883 have awakened the people, the courts, and the juries to the imperative necessity of enforcing the law. It was not that crime grew worse, but that public sentiment grew better.

ALASKA. See UNITED STATES.

ALIKHANOFF, Lieut.-Col., formerly called Maksut Ali Khan, chief of the Merv Oasis. He was born at Lesghin in 1846. He was educated at the gymnasium in Tiflis, and passed through the military school of Constantine. He served first in Russia in the Soumsky regiment of hussars, and returned to the Caucasus as adjutant to the chief of Central Daghestan, and afterward to the military commander of Daghestan district. Subsequently he was attached for special service to the Grand Duke Michael, Imperial Lieutenant of the Caucasus, who placed him in 1873 on the staff of Col. Lomakin, with whom he went through the Khivan campaign, in which he received a wound in the leg. For bravery he received the orders of Vladimir and Stanislas, and was promoted to be major. He accompanied Gen. Lomakin in

1875 on the expedition for punishing the Turkomans. His brilliant career was then interrupted by a punishment as characteristic of the Russian military system as his rapid promotion. For a duel with a fellow-officer he was sentenced to be degraded to the ranks and deprived of his orders. In the Turkish war he served as a non-commissioned officer of dragoons in the Erivan detachment, and strove valiantly to retrieve his fallen fortunes, with such success that he gained the cross of St. George, and by the repeated intercession of Generals Terhukassoff and Lazareff was made a sub-lieutenant. He took part in the first Tekke expedition of 1879. After Skobeleff's capture of Geok Tepe, he visited Merv in the disguise of clerk and interpreter to the Moscow merchant Kanshin. His remarkable knowledge of Oriental character enabled him to enter into relations with the Merv elders, and even with the heroic leader of the defenders of Geok Tepe, and eventually to secure the adherence of the most influential men in the tribe, and prepare the way for the Russian occupation of Merv almost without a shot. For this master-stroke of diplomacy the rank of major was restored to him, and when this grade was abolished in the Russian army he was made a lieutenant-colonel. He is a graphic writer, and possesses a trained talent for artistic sketching, and many drawings and stirring descriptions of his military adventures have appeared in Russian newspapers and illustrated journals.

ANGLICAN CHURCHES. The Anglican Church has in England and Wales (including the two archbishops and several suffragans) 38 bishops, 14,172 benefices, 21,000 clergy, 6,500 curates, and 6,000,000 church-sittings. Including the Protestant Episcopal Church in the United States, which is affiliated with it, though independent, and the Colonial Churches, the Anglican system is represented by a total of 228 bishops and 29,500 clergy.

Convocation.—The Convocation of Canterbury met, for the dispatch of business, Feb. 10. In the upper house, a resolution was passed in reference to the death of Bishop Jackson, of London, who was described as the senior member of the house, "both in rank (next to the president) and in tenure of office, for thirty-one years its truest and most loyal counselor in all questions, social, ecclesiastical, and spiritual." Action was also taken in view of the retirement from active work of Bishop Wordsworth, of Lincoln, in which the house expressed its desire "to record its sense of the important services which, during a long life, he has rendered to literature, to theology, to the Church, and to the world; and its deep respect for his learning, wisdom, and piety." The archbishop made a statement explaining measures which had been adopted to avoid the inconveniences which frequently arose in case of marriages between French and English parties, when, by failure to comply with some specification of the French law, the marriage was regarded as void in France. A form of certificate had been supplied to all the French consular agents in the United Kingdom, in which all the details of the requisitions of the French law were distinctly stated, the possession of which, duly signed, would be evidence that they had been complied with. On the presentation from the lower house of its report on the reform of Convocation, urging application for the royal license to enact and promulgate canons to secure a fuller representation of the clergy of the province in that body, the Bishop of Gloucester and Bristol made a statement of the condition of this question. It had been before Convocation for thirty-two years, and had been debated on several occasions by their lordships upon petitions from the lower house; subsequently, the subject had been referred to ecclesiastical lawyers, whose opinion was that the constitution of Convocation could not be changed except by the full authority of Parliament. The lower house had not accepted these decisions, but had applied to his Grace the President of the upper house to petition the Crown for the specific license to enact canons which, if enacted, would, it was thought, have the effect of enlarging the number of representatives and of electors. The desire of the lower house, after some years had passed, was set out in a case for the opinion of Sir John Karslake, Sir Richard Baggally, and Sir Travers Twiss, but the result was not laid before the Convocation, in consequence of a dissolution. The opinions of the several vicars-general were, however, known, and these were that there had been no change in the constitution of Convocation from the time of Edward I; that the assumption that the words *totus clerus* included all persons in holy orders had no authority; and that his Grace the President of their lordships' house could not change the law, or alter the qualification of voters for proctors, and so allow the clergy in priests' orders, other than incumbents in the Province of Canterbury, to vote for proctors in the lower house of Convocation. Afterward a statement by the Lord Chancellor was presented to the house, that Convocation could not, by any precedent, proceed to enact any canon without the royal sanction being first obtained, and that such canon or canons could not infringe upon the constitutional right of Parliament to alter the constitution of Convocation. A committee of the whole house was appointed to consider the subject of the reservation of the Holy Communion for the purpose of administration to the sick, who made a report, sustained by citations from the rubrics, declaring that practice "contrary to the nice and carefully revised order of the Church of England as expressed in the Book of Common Prayer," and that "no reservation of the sacrament for any purpose is consistent with the rule of the Church of England." The report was unanimously adopted. A report was presented by the joint committee of both houses on the spiritual "needs of the masses of the people," embodying the substance of 379 replies to questions bearing on the subject which had been addressed to 646 rural deaneries. To the question "whether there were any considerable number of the people who were not reached by the ordinary services and methods of the Church," the answers varied. "In some country villages every one of the inhabitants was brought more or less under the eye of the pastor, and derived, more or less consciously, some bias from his influence. In some of the smaller towns leeway had been made by past neglect, and even in the greatest cities progress had been made with the darkest and densest mass of the population." While it was "acknowledged that there were many towns in which a large proportion of the population had not been reached at all, and that there was a low percentage of church-goers among whole bodies of parishioners, yet the tone of the returns generally was rather hopeful than despondent." The report closed with a number of recommendations for promoting an increased interest among working-men in religious matters.

In the lower house the archbishop was asked to direct the appointment of a committee to make a report upon parochial guilds possessing more or less of religious character. The report of a committee which had been appointed to deal with the question of the recovery of fallen women was considered, and a resolution was adopted inviting diocesan conferences "to use their influence for the maintenance and restoration of female purity by encouraging the institution of industrial homes for neglected girls, of penitentiaries for fallen women, and of other similar institutions." A *gravamen* was adopted in which, after mentioning some of the complications and perplexing questions that had been developed by recent legislation on the subject of marriage and divorce, the upper house was requested to consider the subject, with a view of giving to their clergy and to the Church at large such an exposition of the law of the Church as will suffice in any difficulties which "may have arisen from the changes in the law of the realm, and prevent any breach of the law of the Church through ignorance of what that law is."

At the meeting of the Convocation in April, a copy of the new revision of the English version of the Old Testament was presented to the houses, with the report of the committee having the subject in charge.

The Convocation met again July 7. A minute was made relative to the death of the Bishop of Salisbury (Dr. Moberly), "whose great learning," it recited, "ability, loving character. as well as gentleness to all men, have endeared his memory to his countrymen, and who has left an example for perpetual imitation." The subject of forming a house of laymen, to meet as lay advisers of the Convocation, was considered. The upper house had laid out a scheme, and the lower house had made objections to some points. The amendments proposed by the lower house were accepted by the upper house. A report relative to sisterhoods and deaconesses was accepted, and the committee making it was requested to frame some recommendations. The archbishop reported upon the correspondence with the Government which had been carried on on behalf of the upper house respecting the "Criminal Law Amendment Bill"—a measure for the more efficient protection of girls against seduction. Convocation had urged immediate attention in favor of the bill, to which the Home Secretary replied that the views of the upper house should have his best consideration. A report on divorce embodied the results of the examination of many authorities, and of the canons of the Councils which had dealt with the matter. The committee found that some of the early fathers had allowed remarriage in the case of innocent persons, and that the action of the Church of England had not always been uniform. The report advised the house (upper) to make the following declaration: "That in the case where the sin of adultery shall have been proved before a competent court, and a decree of divorce shall have been obtained, the innocent party so set free ought to be advised not to remarry during the lifetime of the guilty party; that if, however, the innocent party shall remarry, the charity of the Church requires that the ministrations of the Church shall not be withheld from the person so remarried, or from the person with whom the marriage shall have been contracted; that in case of the remarriage of the guilty person, the ministrations of the Church ought not to be granted, saving, however, that the bishop shall have the power, after personal investigation, to give such directions in any case of penitence as he shall consider consonant with the teaching of Holy Scriptures and the usual practice of the primitive church."

In the Convocation of York, at its meeting in April, a committee was appointed in the upper house to consider the relation of the Episcopate to the Church Army; a resolution was adopted that the consecration of burial-grounds be continued, but that no objection should be made to a "dedicatory" service on special occasions; and a report was adopted concerning the admission to the office of sisters and deaconesses, in which the bishops shall have a controlling power. The lower house adopted a resolution that every encouragement should be given to the spiritual ministrations of lay members of the Church.

Missionary Societies.—The annual meeting of the Church Missionary Society was held in London, May 5. The Earl of Chichester presided. The receipts of the society had been: from general contributions, etc., £198,212; for Extension fund, £3,136; and for various special funds and interest, £30,193; making a total of £231,541. The general expenditure had been £207,283. The society had received

105 offers for missionary services during the year, and had accepted 45.

The annual public meeting of the Society for the Propagation of the Gospel in Foreign Parts was held in London, June 3. The Archbishop of Canterbury presided. The gross income of the society for the year had been £110,039. The number of missionaries returned was 544, of whom 168 were laboring in Asia, 135 in Africa, 17 in Australia and the Pacific, 197 in North America, 26 in the West Indies, and 1 in Europe. About 1,600 catechists and lay-teachers, mostly natives, were employed in the missions, and about 350 students were returned as in the society's colleges.

Liberation Society.—The annual meetings of the Society for the Liberation of Religion from State Patronage and Control were held in London, May 13. The receipts of the society for the year had been £9,417, and its disbursements £8,670. The Executive Committee in its report took the ground that the settlement of the reform question had cleared the way for more resolute and decisive action on the part of the friends of religious activity. It was believed that the time had arrived when, at the coming general election, the question of disestablishment should be resolutely urged as one demanding early legislative settlement. Hence it was resolved to adopt immediate and energetic measures for securing the choice of candidates favorable to the society's object. In moving the adoption of the report, the chairman remarked that the action of the society was not directed against the Church as a religious institution at all, but simply as a state establishment; and if irreligious men supported the movement, it must be remembered that the end in view was a political one, and must be attained by political means. The report was adopted, together with a resolution demanding that all Liberal candidates should be required at least to vote for the abolition of the Church establishments in Wales and Scotland. The Government bill for amending the laws regulating the provision and management of parochial burial-places, and Mr. Hopwood's bill for the abolition of compulsory oaths, were approved.

A special conference, convened by the Liberation Society, was held in London, March 24, to secure energetic action in preparing for the general election, with a view to obtaining the return of the largest number of candidates favorable to the objects of the society. Satisfaction was expressed at the introduction by Mr. Peddie, M. P., of a bill to disestablish and disendow the Church of Scotland, and at the intention of Mr. Dilwyn, M. P., to endeavor to submit to the House of Commons a motion for disestablishment of the Church in Wales. Mr. Peddie's bill in reference to the Church of Scotland proposes that it cease to be established by law on Jan. 1, 1887, when the ministers shall be dealt with in respect of compensation as public servants deprived of public office. All under thirty years of age shall receive annuities equal to half of all their emoluments. The annuities allowed to ministers beyond that age shall increase with their age, so that at the age of sixty years every minister shall receive the full amount of his stipend and of all his present emoluments. The surplus funds are, by the provisions of the bill, to be applied in relief of school fees and rates and other educational purposes, and to such purposes of public utility and necessity, not of a religious and ecclesiastical character, as Parliament may deem fit. The conference expressed the hope that, besides the adoption of the principle of this bill, and of the one proposed by Mr. Dilwyn for Wales during the next Parliament, the question of disestablishment in England will also be advanced near to a settlement. The bill to amend the law as to oaths by permitting the making of a solemn affirmation instead of an oath was approved.

Church Defense.—The meeting of the Church Defense Institution was held June 19. The Bishop of Durham presided. The report of the secretary recited what had been done during the year in England, Wales, and Scotland to counteract the efforts of the Liberation Society, and to cultivate a public opinion in favor of maintaining the several church establishments in those countries. Concern was expressed as to the effect upon this question of the large increase in the number of qualified voters which would attend the operation of the recent act of Parliament enlarging the suffrage. The Church of Scotland was represented by the Rev. Dr. Phin, ex-Moderator of the General Assembly of that body, who, having asserted the rights of the established churches to demand to be maintained as such, said that the Church of Scotland "had been assailed by the Liberationists with the view to further assault upon the Church of England," and that he hoped that "the churches of the two countries would work hand in hand to resist the common enemy." A resolution was adopted expressing satisfaction at the result of the efforts for the defense of the Church in Wales during the past year, and urging attention everywhere to the diffusion of accurate information respecting the work and claims of the Church, and the inevitable consequences of disestablishment. Another resolution expressed sympathy with the Scottish Establishment in the attack upon it, and pledged the institution "to use all its influence to defeat any measures brought before Parliament which would tend to sever the connection between the Church and state in any part of Great Britain." [For the later discussions of the question of disestablishment, see Great Britain.]

The Church Association.—The annual meeting of the Church Association was held May 13. Mr. J. M. Holt presided, and in his address expressed regret at the spread of ritualism, especially during the last twelve months. The report criticised what were styled the shortcomings of Convocation, insisted that action should be taken against those bishops who "interposed in favor of lawlessness," and stated that the condition of disintegration of Evangelicanism was the most depressing feature of the time. Among the resolutions passed was one directed against the bishops as a body for their conduct in dealing with ritualism.

Free and Open Church Association.—A general meeting of the Free and Open Church Association was held in connection with the Church Congress, at which resolutions were unanimously passed, declaring that "all parishioners, without respect to class, have an equal right to the free use of their parish churches, and that the pew system, under which seats are permanently appropriated to individuals, to the exclusion of the many, is opposed alike to scriptural precept, to the law of the Church, and to the spiritual requirements of the people; that every church should be open and free of access to all at all times as a house of prayer, especially for the use of those living in crowded neighborhoods, who have little opportunity for privacy in their own homes"; and that "the weekly offertory, especially enjoined by the Church in accordance with scriptural injunctions, is the most fitting means of providing for the expenses of Divine worship, and for other pious and charitable uses, inasmuch as it enables every one to give according to his means as an offering unto the Lord, instead of limiting the contributions to fixed payments by the few for the enjoyment of special privileges."

The Church Congress.—The Church Congress met at Portsmouth, Oct. 6. The Bishop of Winchester presided, and in his opening address called attention to the list of topics on the programme of discussions, and reverted to the origin of the Congress in 1860, in the desire among a number of persons connected with the Church of England to see a field provided in which laymen and clergymen could meet for the consideration of all subjects bearing upon the welfare of the Church and nation. The first subject taken up was "The Revised Version of the Old Testament," on which papers were presented or addresses made by the Bishop of Bath and Wells, the Rev. Dr. Driver, of Christchurch College, Oxford, Canon Kirkpatrick, of the University of Cambridge, the Rev. Dr. Wright, and Archdeacon Palmer. The next topic was "The Responsibility of the Church as regards the Spiritual and Moral Welfare of our Soldiers and Sailors," on which the speakers were the Rev. J. B. Harbord, Chaplain of the Fleet, the Rev. Canon Beach, principal chaplain at Aldershot, Lieut.-Col. Walker, and other persons connected with the forces. The subject of "Church Work among Young Men" was considered by the Rev. George Everard, with especial reference to the time between school and marriage; Mr. William Inglis, President of the Church of England Working-men's Society, Lieut.-Col. Evritt, and Mr. J. G. Adderly. The second day's discussions were opened with the consideration of "The Work of Women in the Church," under three heads: "As Sisters and Deaconesses," by Mr. John Pares; "Rescue Work in Towns," by the Rev. Arthur C. Thynne; and "The Girls' Friendly Society," by Mrs. Townsend; and these speakers were followed by the Bishop of Oxford, the Rev. R. C. Billing, the Bishop of Carlisle, and the Rev. G. J. Athill. "The Influence of Art on Religion and of Religion on Art" was considered in papers by Mr. J. D. Sedding; Mr. F. T. Palgrave, on the "History of Art"; Mr. J. C. Horsley, R. A., on "Art Schools and Art Practice in their Relation to a Moral and Religious Life"; and Mr. W. J. Courthope, on the "Reasons for the Antagonism between Art and Religion in England," with volunteered addresses. On "Evangelizing Agencies supplementary to the Parochial System," papers were read by the Dean of Manchester and the Rev. W. Carlile, and were followed by verbal addresses. The other topics for this day were "The Cathedral in its Relation to the Diocese and the Church at large," on which the papers and addresses were by the Dean of Wells, Archdeacon Hannah, the Bishops of Carlisle, Southwell, and Winchester, Mr. Beresford Hope, and others; and "The Doctrine of Holy Scripture and the Attitude of the Church with respect to War," considered by Prebendary Row, the Rev. A. C. Edersheim, the Rev. Aubrey L. Moore, and others. At an evening working-men's meeting, over which the Bishop of Winchester presided, and at which the Bishop of Carlisle made the address, a request was received from the Secretary of the Railway Servants' Congress, asking co-operation in discouraging the increase of Sunday duties imposed on railway servants, to which a favorable response was unanimously made. The subject of "The Teaching Work of the Church" was discussed in the three departments, "Exegesis of Scripture," by Canon Westcott; "Doctrine and Ethics," by Prebendary Stephens; and "Church History," by Canon Creighton, of the University of Cambridge, whose papers were followed by a general discussion. The subject of "The Church in India" was considered, as to "Europeans and Eurasians — their Spiritual and Educational Needs," by Archdeacon Baly; and "The Native Races," by the Rev. J. C. Whitley, Sir Charles Turner, late Chief-Justice of Madras, and the Rev. W. R. Blackett. On the subject of "Church Defense," "The History of Church Property and Endowments" was presented by the Rev. Thomas Moore, and "The Social Defense of the National Church" was considered by Mr. Beresford Hope, M. P. The Church Defense League was commended, and an expression was voted against free elementary schools. On the last day of the session, the subject of "The Spiritual Life" was considered, with reference to its "Intellectual Trials," by the Rev. H. Footman, the Rev. J. E.

C. Welldon, and the Rev. Charles Gore; "The Respective Influences of Devotion and Work in forming the Spiritual Life," by the Rev. H. W. Webb Peploe and Prebendary Baker; and "The Difficulties of Private Devotion and the Aids to it," by Canon McCormick and Prebendary R. F. Wilson. Other subjects discussed during the sessions of the Congress were "Legislative Proposals with a View to the Suppression of Intemperance"; "The Bearing of Christianity upon the Mutual Relation of the Rich and Poor—Employers and Employed"; "The Church and the Printing-Press"; "The Expediency of providing Pensions for the Clergy"; "The Attitude of the Church with respect to Movements in Foreign Churches"; and "The Rearrangement of the Services of the Church, and the Provision of Supplementary Services in the Prayer-Book."

ANNAM, a kingdom in Asia, under the protection of France. In 1882 France asserted her claims to a protectorate over the Annamite dominion, and especially over the province of Tonquin, under the terms of a treaty concluded in 1874. The Tonquinese people resisted the assertion of the protectorate. The Chinese Government claimed suzerainty over the same countries. France began a series of military operations to enforce the treaty. A determined resistance was made by the Black Flags, a military association of Chinamen settled in the north of Tonquin, who were abetted by the Mandarinate or official class of Annam, and encouraged, aided, and re-enforced by volunteers from China, and who rendered the effective occupation of the country impossible. After long operations and heavy sacrifices, the French troops drove back the Black Flag guerrillas to the extreme north near the Chinese frontier. The Chinese Government agreed to a provisional treaty, recognizing the French protectorate over Tonquin and Annam, withdrawing its claims of effective suzerainty, and promising to evacuate certain points in northern Tonquin where Chinese garrisons were posted in virtue of suzerainty. While French troops were proceeding to occupy the fortress of Langson a collision with the Chinese garrison occurred. The Republic demanded an indemnity and the ratification of the treaty. The Chinese Government denied that its officers were in the wrong, and reasserted its claims over Tonquin. France then began a series of reprisals against China. The Chinese re-entered Tonquin and drove back the French troops, while the French naval squadron bombarded the arsenal of Foochow, captured Kelung, and proclaimed a blockade of the ports of Formosa. During the course of the earlier operations in Tonquin the King of Annam died, in 1883, and with his successor the French concluded a treaty in which he acknowledged the French protectorate, and gave to the French control over the administration of the province of Tonquin, which was assumed on the ground of suppressing river-pirates and freebooters.

The kingdom of Annam comprises Cochin-China, excepting the six provinces ceded to France in 1862 and 1867, the province of Tonquin, conquered in 1802, in the north, and Tsiampa in the south, besides the tributary Laos states and the independent Moi tribes. The area of Annam proper is about 170,000 square miles. The population is estimated at about 21,000,000, of whom 15,000,000 live in Tonquin. The capital of Annam is Hué, with 30,000 inhabitants. Hanoi, the capital of Tonquin, has 120,000, including 3,000 Chinese. There are in the country about 420,000 Christians and six Roman Catholic bishoprics. The total export and import trade of the port of Haiphong in 1881 was about $2,000,000 in value. The articles of export are silk-stuffs, raw silk, lacquer, tin, drugs, cotton, edible fungi, aniseseed oil, etc. The import articles are cotton yarn, shoes, iron, Chinese porcelain, opium, potatoes, petroleum, hardware, etc. The commerce is mainly with China. Tonquin is extremely fertile. Extensive beds of valuable coal are said to exist, and numerous gold, silver, iron, and copper mines.

The form of government in Annam is an absolute monarchy. The King, called the Hwang-te, has a privy council of seven ministers. Over each of the two principal divisions of the empire, Tonquin and Cochin China, there is a viceroy, and at the head of every province a governor.

The Military Campaign.—In December, 1884, the French troops had retired from the hill-country in the north of the province before the strong army which China threw into Tonquin. Gen. Brière de l'Isle, their commander-in-chief, held several posts in the delta with his force, while Gen. Négrier's detachment was intrenched on a line close to the delta. The delta was in a disordered condition. The French were unable to move, and had no troops to send to other posts. Their original force of 18,000 soldiers was reduced by the discharge of men whose time had expired, and by sickness, to 11,000, and of these a large number were non-effective. Bad water and exposure caused much sickness. They were unable to procure coolies or animals for transport. The Chinese built a military road from near Langson to Kwangyen, and subjected the French to constant skirmishing attacks. The descent of the Chinese into the delta was checked in November by a desperate battle in which the whole available French force was engaged, and as the result of which the important stronghold of Kep, or Lang Kep, fell into the hands of the French. This position, on the main road to Langson at the entrance of the hill-country, was captured after heavy fighting that lasted for a day and a half. As many as 640 Chinese were found dead in the citadel, and more than 300 were shot in the tall grass outside. The Chinese showed a great improvement in discipline and order, and were armed with good rifles of German manufacture. A detachment of Chinese was sent by the other route to flank the French, but was met at Chu, fifty-three miles east of Kep, and defeated in a hard fight, leaving that place also in the possession of the French. The Chinese retired to a position in the hills about twenty miles back of Kep.

The policy of the French Government, sanctioned by the vote of the Chamber of Nov. 27, 1884, was to confine the operations chiefly to Tonquin and effect a complete occupation as the surest way of overcoming the Chinese resistance and enforcing the execution of the Treaty of Tientsin. The direction of operations was transferred, after the resignation of Gen. Campenon, who as Minister of War disapproved of denuding France of soldiers for enlarging the operations in Tonquin, from the marine to the war office, now in charge of Gen. Lewal. In pursuance of this policy large re-enforcements were sent out from France and Algeria. By the end of January a French force of about 6,000 men was concentrated at Kep and Chu, preparatory to an advance upon Langson. To make up this small army the garrisons in the delta and in the northwest were dangerously weakened. The forward movement began Feb. 2. The French marched in two columns, the two brigades of Gen. Brière de l'Isle and Gen. de Négrier. Gen. de Négrier, commander of the advance column, by an ingenious *ruse* deceived the Chinese as to the time of the advance and the line of march, and so succeeded in flanking their main body. On Jan. 30 he ascended from Kep in a balloon and reconnoitred the strength and position of the enemy in the direction of Bac-Le. Leaving his balloon to float for a day longer, he descended early in the morning of the 31st to Phu-Lang-Thung, embarked with his troops, and was carried down the Thuong and up the Loch-Nam river to Chu, uniting with Gen. Brière de l'Isle's force. On the 2d of February both generals set out with their brigades from Chu. Though the bulk of the Chinese army guarded the Bac-Le route, the French soldiers had to carry intrenched positions that were stoutly defended by superior numbers. The road led through a defile five miles long lined with fortifications to the fortified Chinese camp at the village of Dong-Son. On every hill at each side of the narrow valley was a fort. On a ridge intersecting the valley were several forts, and numerous others at Dong-Son. The forts were attacked in succession by mountain guns conducted along the ridge of hills on either side, and then carried at the point of the bayonet. One fort held out the greater part of a day; one was casemated, and was only entered by laying a mine of dynamite at night. The Chinese fought stubbornly. Many of them were large and powerful men. The French troops were burdened with five days' rations and showed a sustained energy and endurance not so readily expected of them as the military skill and high courage they also displayed. The forts were not provided with cannons as a general thing, and those that were had guns of an inferior kind. The forts at Dong-Son were not as strong as those in the defile, and the Chinese, disheartened by the results of the previous two days' fighting, defended them less vigorously. The battle began on the 3d of February. By noon on the 6th the French were in possession of Dong-Son after thirty-six forts in all were carried by assault. Their losses were very heavy. Large stores of provisions and gunpowder were found in the evacuated forts. They halted four days at Dong-Son to enable the train of coolies to come up with provisions. On the 8th a body of picked Chinese troops, detached from the army at Bac-Le, attacked the vanguard, composed of soldiers of the Foreign Legion, and nearly succeeded in turning their position by a well-executed diversion in their rear. The column moved forward on the 10th. The Chinese retreated before them, falling back to a position in the hills in front of Langson, where they concentrated a large force for their main stand. The French were confronted with a better class of men than those encountered in their previous campaigns. Not only had the raw levies of southern China learned to fight from their antagonists, but they were now re-enforced by a certain number of the picked imperial troops of the Mantchoo guard. Their quick and accurate rifle-fire gave the French troops a great advantage, and on this they had to depend chiefly for success. They were deficient in cavalry, and their artillery was useless, owing to the almost impassable state of the roads, which prevented them from bringing their guns into action until the infantry had sustained the brunt of the battle. With 500 more cavalry they might have turned the retreat at Dong-Son into a rout. As it was, the Chinese retreated in good order, and the necessarily slow movements of the French over the poor and narrow roads left them time to rally and concentrate for fresh action at a good position farther back. The regular road from Dong-Son was so broken down by the retreating Chinese as to be impassable to artillery. Gen. de Négrier was therefore obliged to take another road that started from the place of their first bivouac. About noon they came upon the rear of a Chinese column in retreat from Dong-Son, and quickened their movements by sending Krupp shells among them. The Chinese placed sharpshooters on the nearer hills to cover their retreat, while the main body crossed a plain and took position on the heights beyond. The French ceased firing for the night, after dislodging the rear-guard and occupying the abandoned positions and a deserted village in the plain. In the darkness the Chinese retired to a more defensible position among the hills. When the French came up at noon on the 12th they gave battle. The French worked their way, under cover of a constant artillery-discharge, along a ridge in front of the enemy, who raked their ranks with a hot fire of musketry. After two hours of incessant firing the Chinese retreated to a ridge farther back for a final stand. The battle-field was strewed with the dead bodies of Turcos, who formed the French front line in this engagement, and with a larger number of Chinese. From the height beyond the Chinese answered the rifles of the Turcos, and the artillery, posted behind the latter, for an hour or longer, and then retreated. A fort was captured with a bayonet-charge. The following morning the French marched on to Langson. The Chinese commander, Pao-Tchao, did not attempt to defend the fortress and subject his troops uselessly to the terrifying and destructive 80-centimetre shells of the French. Spiking or burying the guns in the citadel, the Chinese crossed the Song-ki-Kung river. At noon on the 13th the French occupied the deserted fortress. The Chinese ranged themselves in order of battle under the Ki-Lua fort, 1,000 yards away, but a few shells caused their gaudy banners to disappear. The French troops then took possession of the other fortress. In the battle before Langson the French losses were as great as in all the previous engagements together. The strength of Gen. Pao-Tchao's force was estimated at from 10,000 to 15,000. The entire Chinese army on both the Bac-Le and the Chu routes was variously estimated at from 50,000 to 100,000. These successes placed the French in possession of all the important fortresses of Tonquin with the exception of Cao-Binh and That-Ki.

While the two generals were engaged in the operations against the Quangsi army in the north, the Chinese troops from Yunnan advanced from the west, overrunning the garrisons that were left there, and descended the Claire river to the fortress of Thuyen-Quan, which they entirely invested. Leaving Gen. Négrier with a considerable force in Langson, the commander-in-chief descended to Hanoi by forced marches over the Bac-Le road, which was soon cleared of Chinese. On the night of Feb. 24, Thuyen-Quan was furiously attacked, but the Chinese were repelled with considerable loss. At this time Gen. Brière de l'Isle was advancing to succor the hard-pressed garrison. In the mean while Gen. Négrier had attacked and dispersed the Chinese beyond Langson, capturing some Krupp guns and mitrailleuses, and occupying the frontier town of Cua-Ai. In an engagement on Feb. 27, he took from the enemy a large quantity of war material and ammunition, besides other stores of all kinds. The relief came almost too late to Thuyen-Quan. During the siege the losses of the garrison were 85 officers and men, as officially reported. The relieving column fought their way through the Chinese troops with a loss of 463 killed and wounded, on the 2d and 3d of March. There were said to be 20,000 Chinese troops engaged in the two battles at Haomoc and before Thuyen-Quan. When the Algerian sharpshooters attempted to storm a fort on the 2d, the Chinese exploded a group of immense mines under their feet. Other mines were passed over on the 3d, but the swiftness of the French charge prevented the enemy from igniting them. After these engagements, the Yunnan army raised the siege, and withdrew in the direction of Thuan-Quan. The remnants of the Quangsi army were gathered at Lang-Chau. Gen. Brière de l'Isle, with the gunboats in Tonquin, established a blockade of Pakhoi. In the middle of March 2,500 fresh troops arrived from Europe. The commanding general prepared an expedition against Thuan-Quan. The French army in Tonquin was now 25,000 strong. Gen. Négrier was re-enforced at Langson and along the delta line. He had pushed a reconnaissance into Chinese territory a few days before. At this moment a fresh Chinese army advanced against him from Quangsi. On the 24th of March a severe engagement took place near the Chinese frontier. The French troops fought with spirit and vigor. Their own loss was reported to be 7 officers and 72 soldiers killed, and 6 officers and 190 men wounded. The news of this check gave the opponents of the Opportunist policy of adventure an opportunity to attack the Chinese policy of the Government. Their strongest argument was, that the ministry was not frank and truthful, and that the worst was withheld in the reports from Tonquin. The consideration that French successes in Tonquin were always barren victories, that the Chinese Government could hurl against them horde after horde of levies from the over-populated provinces of southern China, while the losses in the hospital and on the battle-field already crippled the French army, and the cost of maintaining a large force in Eastern Asia threatened to mount up into the milliards, had due weight only with a minority. When M. Delafosse deprecated the loss of brave men in so senseless and criminal an enterprise, M. Ferry challenged him to propose the evacuation of Tonquin. On an interpellation of M. Granier, the Chamber sustained the Government with a majority of 259 to 209. A hopeful dispatch from Gen. Négrier, which arrived opportunely, made it appear as though the Chinese advance were effectually checked. The general telegraphed that he needed no re-enforcements, and that his artillery was sufficient. On the 25th he was with the vanguard at the Chinese Gate, waiting for the enemy to show themselves. The main body of the brigade was concentrated at Langson, whither the general returned on the 26th. The day after the Chamber voted the order of the day pure and simple on M. Granier's interpellation, came news of the fall of Langson, which swept the Ferry Cabinet from office.

On the 27th of March the Chinese debouched in great masses in front of the French position at Ki-Lua, and, advancing in three columns, attacked impetuously the French front. At an early stage of the action Gen. Négrier was severely wounded. The command fell to Col. Herbinger. That officer, dismayed by the great numerical superiority of the enemy, and fearing that his ammunition would run short, ordered a retreat. The French fell back upon Dong-Son and Than-Moi. The French soldiers displayed their usual bravery, and succeeded in driving back the Chinese once by a counter-attack, in which they sustained only slight losses. The brigade had twenty days' rations and munitions. Gen. Brière de l'Isle sent all his available forces forward to Chu and Kep, the openings at the edge of the hills, and telegraphed that he hoped to be able to defend the delta. Proceeding to Chu, he found the state of affairs more favorable than he expected. The Chinese seemed bent merely on occupying their old positions north of Deo-Van and Deo-Quan, heights between Chu and Dong-Son, which were reoccupied by the French after the arrival of the commander-in-chief. Col. Herbinger had evacuated Dong-Son on March 30, after two slight encounters, retreating to Kep and Chu along the Kep and Deo-Quan routes. The general considered that his evacuation of Langson was precipitate, and the retreat from Dong-Son to Chu inexcusable. He therefore superseded him in the command of the brigade, putting Col. Desbordes in his place. Colonel Herbinger was ordered home for trial, and then sent back to Tonquin, and, in September, acquitted on the ground of the suddenness and newness of the responsibilities thrust upon him. When the news of the Langson disaster was received in France, the Government hastened the dispatch of reenforcements then in progress. One of M. Ferry's last acts was to charter nine steamers to enable the 8,000 troops ordered to Tonquin all to embark before April 12. M. Ferry announced the long-threatened blockade of the Gulf of Pechili, and asked for a credit of 100,000,000 francs for the Ministry of War, and an equal sum for the Ministry of the Navy, in order to retrieve and avenge the rebuff at Langson. On a motion for priority for the vote of credit over a vote of censure, moved by M. Ribot, the Government was defeated by 308 to 161 votes, upon which M. Ferry announced the resignation of the Cabinet, March 30. A motion for the impeachment of the ministers found as many supporters as had voted for the Government.

Ever since January, negotiations for peace had been hopefully proceeding, but through so irregular and roundabout a channel that M. Ferry deemed it best not to divulge them. The Franco-Chinese conflict passed through singular and unexpected phases because it depended in a great measure on trivial and personal motives. The Marquis Tseng had great influence in plunging his government into this unofficial war. He was actuated in great part by the feeling of resentment against the Ferry Cabinet for the aggravating treatment he had received at their hands. By a curious coincidence his threat of bringing about the fall of the Cabinet was accomplished by the Chinese army in the field at a moment when his policy had been overruled in the imperial councils. M. Brisson was not even aware of the secret negotiations for peace going on in Paris, as M. Grévy, not wishing to embarrass the action of the new Cabinet by asking them to deal with a business so complicated and dubious as the overtures for peace entertained by M. Ferry, and unwilling that the chance for peace should be lost through new complications and interruptions, had appointed M. Billot to treat with the Chinese plenipotentiary. The new Cabinet proposed and obtained a vote of 150,000,000 francs, and announced that they would send 10,000 men to Tonquin immediately, and that, if necessary to reconquer the country, 60,000 would be sent out. Before the money had been voted, the Tsung-li-Yamen had already ratified the agreement and ordered the gradual evacuation of Tonquin. General Brière de l'Isle, upon receiving notice, on April 10, of the conclusion of peace, sent emissaries to notify the Chinese. Before his messengers arrived, the military mandarins, not having received their instructions from Peking, ordered an attack upon Kep on the 14th of April. The force of 2,000 men that carried it out was repelled and driven beyond Bac-Le. The same day French gunboats were attacked while making a reconnaissance on the Black river, and the detachment that attacked them was routed by the garrison of Hung Hoa. The cessation of hostilities was not welcomed by the French troops, who were anxious to retrieve their reputation after the retreat from Langson. The Chinese generals, flushed with their successes, were disappointed and provoked at the action of their government in yielding in the moment of victory. On the 5th of May the Chinese evacuated Langson. On the 12th Gen. Brière de l'Isle, in answer to a request of the Chinese Government, received through M. Patenôtre, for a few days' delay to enable the Chinese troops to complete the evacuation of the Red river district, granted ten days' delay on condition that he was placed in possession of Thuan-Quan on the 25th. Two Chinese commissioners were sent to Tonquin to conduct the evacuation. The Viceroy of Yunnan issued proclamations commanding the rebels to lay down their arms. There was much difficulty with the Black Flags, and their commander, Luh Vinh Phuoc; and the guerillas recommenced their disturbances after the withdrawal of the Chinese troops. The evacuation by the Chinese forces was completed by the dates fixed.

The cost of the Tonquin campaign, according to the report of the French budget committee, amounted in July, 1885, to 470,000,000 francs, of which only 270,000,000 francs had been voted. The Government in April appointed Gen. Courcy to the chief command in Tonquin, and made arrangements to form two divisions for active service in that country, and a third division, to remain ready for sailing in the south of France, as a reserve. Gen. Courcy assumed command of the army in Tonquin June 1.

Negotiations for Peace.—After the failure of the English intermediation in November, 1884, M. Patenôtre, the French envoy, left Peking, and no further official communications were held between the French and Chinese Governments. The German Minister at Peking endeavored to mediate, but his good offices were not acceptable to either party. The irregular hostilities on the Chinese coast entered into the phase of regular warfare, in the judgment of the British authorities, at the beginning of the year. The declaration of British neutrality, and the proclamation of the foreign enlistment act, rendered operations more difficult for both France and China. The French squadron declared rice contraband of war, and stopped, as far as possible, the food-supply of the metropolis. A blockade of the Gulf of Pechili was threatened. Though the imperial granaries at Peking were said to be full, the treasury was depleted. The special reserve against dynastic emergencies, which amounted in September, 1884, to 20,000,000 taels or dollars, was nearly exhausted. The conflict had cost the Chinese Government 60,000,000 taels, besides the loss of the Min fleet and arsenal and the ships destroyed since. The hoards of officials were drawn upon heavily. The Marquis Tseng, prompted by animosity against M. Ferry and jealousy of Li-Hung-Chang, had used up the accumulations of his family and replenished them by large borrowings. Tso-Tsung-Tang, who was charged with the defense of Foochow, contracted a loan of $5,000,000 with the Rothschilds. Peng-Yu-Ling, the energetic defender of Canton, borrowed the same sum from the Hong-Kong Bank, after using up the hoards of his subordinates. Prince Chun, who supplanted his brother, Prince Kung, when the latter was dismissed for his peaceful tendencies, was now desirous of peace himself, though he was timid in the assertion of his new views. The Marquis Tseng telegraphed that no more loans were negotiable in Europe, and the Viceroy of Canton reported that the buried hoards of the high functionaries were exhausted.

In reply to a question in the Chamber in February, M. Ferry declared, for the first time, that the only object the Government had in Tonquin and China was to secure the execution in its entirety of the Tientsin Treaty. Mr. Campbell, the Parisian agent of the Chinese custom-house, called upon the Premier and informed him that Sir Robert Hart, director of the Chinese customs, was informed, through a Chinese subordinate who had personal relations with important personages, that the abandonment of the claim of indemnity that seemed to be implied in M. Ferry's remark would have a favorable effect upon the Chinese court in the direction of peace. M. Ferry replied that it was for China to make an offer, but that no proposal based upon the idea of a neutral zone or any form of Chinese suzerainty over Tonquin would be considered. A few days later Mr. Campbell informed M. Ferry that the Empress had signed a secret decree empowering the Prince President of the Tsung-li-Yamen to discuss preliminaries of peace. M. Ferry thought of drawing back when he found that the medium of negotiations was a minor official in the custom-house who insisted on the utmost secrecy. He was encouraged to proceed after learning from a person acquainted with China that important negotiations were sometimes conducted in this fashion, and still more by overtures coming from the Chinese Ambassador at Berlin, by hints conveyed to him from the Marquis Tseng, who wished to become the intermediary of peace, and by overtures made simultaneously by Li-Hung-Chang to M. Huber, the French consul at Tientsin, who had left his post at the time of the complete rupture in February. In the transactions with the secret negotiator an armistice was spoken of, during which a treaty of peace was to be drawn up on bases not yet discussed, when the tidings of the Langson disaster arrived. That event strengthened M. Ferry's suspicions that he was the victim of a trick. Asking Mr. Campbell whether he had received a definite reply, and whether the preliminaries would be ratified by the Chinese Government, and receiving the answer that definite instructions had not arrived, M. Ferry went to the Chamber and asked for the credit of 200,000,000 francs. M. Ferry's formal proposal had been in the hands of the Chinese Government since February 25. After the resignation of M. Ferry, and before the appointment of his successor, the preliminary bases of a treaty were telegraphed from China, and the speedy arrival in Paris of Col. Tcheng-Ki-Tong, military *attaché* of the Chinese legation at Berlin, was announced.

The preliminaries, embodying the Chinese proposals and the French counter-proposals, were contained in a protocol of three articles and an explanatory note. In the first article China consents to ratify the convention of Tientsin of May 11, 1884, and France declares that she has no other object than the complete execution of the treaty. In the second article, both powers consent to discontinue hostilities, and France agrees to raise the blockade of Formosa. In the third, France consents to send a minister in order to arrange the detailed treaty. The explanatory notes stipulated: (1) that all military operations by land and sea should be discontinued upon the promulgation of an imperial decree ordering the execution of the convention of Tientsin and the evacuation of Tonquin by Chinese troops; (2) that as soon as this order should be issued the blockade of Formosa and Pakhoi would be raised and negotiations entered into for a final treaty of peace, friendship, and commerce, in which the date for the French evacuation of Formosa would be fixed; (3) that the evacuation of Tonquin should be completed by the Quangsi troops before April 30, and by those from Yunnan before May 30, earlier dates being fixed for the beginning of the evacuation and the cessation of hostilities, the commanders on either side who first received the order to discontinue hostilities to be charged with the duty of notifying the nearest enemy; and (4) that both parties agree to abstain from sending troops or munitions to Formosa during the armistice, and upon the signing of the final treaty France will desist from searches for contraband of war on the high seas, and China will reopen her treaty ports to French commerce.

The preliminaries of peace were signed at Paris on the night of April 3 by the Chinese plenipotentiary, Mr. Campbell, and by M. Ribot on behalf of the French Government. They were at once ratified by the Tsung-li-Yamen, and the decree of the evacuation of Tonquin was published in the Peking official gazette.

In the negotiations the principal difficulty that arose was in reference to the question of China's suzerainty over Annam. In the final treaty the matter was treated with a vague phrase, which left the sentimental and historical claim of China precisely where it was, while giving France a free hand in the establishment of her protectorate.

The Treaty of Peace.—The new Treaty of Tientsin was executed June 9, 1885, between M. Patenôtre, the French plenipotentiary, and the Governor of Pechili and principal Secretary of State of the Chinese Empire, Li-Hung-Chang, assisted by Si-Tchen, President of the Ministry of Justice and member of the Council for Foreign Affairs, and by Teng-Tcheng-Sieon, member of the Council of State Ceremonial. The treaty was based on the convention of Tientsin of June 11, 1884, which was ratified by imperial decree April 10, 1885. The first article provides for the restoration and maintenance of order on the border between China and Tonquin. France undertakes to disperse the bands of freebooters and adventurers, and to prevent them from forming again, but promises not to cross the Chinese frontier. China promises to expel the bands that take refuge in her provinces, and to disperse those that seek to form in her territory for the purpose of introducing disorder in Tonquin, but debars herself from sending troops into Tonquin. Provisions for the extradition of malefactors will be the subject of a special convention. Chinese colonists and old soldiers living peaceably in Tonquin and devoting themselves to industrial pursuits will enjoy the same security as persons protected by France. In Article II China promises not to interfere with any treaties or conventions concluded or to be concluded directly between France and Annam. The relations between China and Annam will be of a nature not infringing on the dignity of the Chinese Empire, and not giving rise to any violations of the treaty. Article III provides for demarkating and monumenting the boundary between Tonquin and China by a joint commission within six months after the signing of the treaty. In case of disagreement as to the sites of the stones, or as to alterations to be made in the existing boundary in the interest of both countries, the question was to be referred to their respective Governments. Article IV stipulates that Frenchmen, or persons under French protection, and foreign inhabitants of Tonquin, must provide themselves with passports, to be furnished by the Chinese frontier authorities upon the application of the French authorities, before entering China from Tonquin, and Chinese subjects crossing the land frontier into Tonquin must procure passports in like manner from the French authorities. For Chinese subjects returning from Tonquin a permit of the Chinese authorities is sufficient. Article V declares that export and import trade shall be permitted to French merchants and French *protégés*, and to Chinese merchants on the frontier between China and Tonquin, to be conducted through certain points that should be subsequently fixed, and of which the number and the selection should depend upon the importance and the direction of the traffic, keeping in view the Chinese internal regulations. Two such points were to be established under all circumstances on the Chinese frontier, one of them above Lao-Kai and the other beyond Langson. French merchants may settle there under the same conditions as in the treaty ports. The Chinese Government shall establish custom-houses there, and the Republic may support consuls there with the same privileges and attributes as are possessed by agents of that class in the open ports. The Emperor of China may, on his side, with the agreement of the French Government, name consuls in the principal towns of Tonquin. Article VI provides for the formulation by joint commissioners, within three months after the signature of the treaty, of regulations under which trade may be carried on between Tonquin and the Chinese provinces of Yunnan, Kuang-Si, and Canton. In the overland trade between Tonquin and the provinces of Yunnan and Kuang-Si merchandise was to be subject to lower duties than those laid down in the existing tariff of foreign commerce, but the reduced tariff would not apply to the trade with Canton. Arms and other munitions and materials of war would be subject to the regulations enforced by each state within its territories. The exportation and importation of opium would be controlled by special arrangements which would appear in the commercial regulations to be settled upon. Commerce by sea between China and Annam was also to be the subject of a special regulation. Provisionally there would be no innovation on the existing practice. Article VII stated the intention of the Government of the Republic to construct roads and railroads in Tonquin in order to develop under advantageous conditions the commercial and neighborly relations which it is the object of the treaty to re-establish between France and China, and expressed the purpose of China, when she shall have decided to construct railroads, to apply to the French Government, which will give facilities for procuring the persons required, and to employ French industry, without, however, conferring any exclusive privilege in favor of France. The eighth article provides that the commercial stipulations and the regulations to be added may be revised after an interval of ten years from the exchange of ratifications, but that they will remain in force for successive periods of ten years unless one of the high contracting parties gives notice of revision six months before that date or its return. In the same article France bound herself to retire from Kelung, and to abandon the right of search on the high seas immediately, and to evacuate entirely the island of Formosa and the Pescadores within a month after the signing of the treaty. The ninth and last article affirms the continuance in force of all former treaties, agreements, and conventions between China and France not modified by the present treaty, and declares that the treaty would be ratified immediately by the Emperor of China, and that the exchange of ratifications should take place at Peking with the least possible delay after its ratification by the President of the French Republic.

The Revolt at Hué.—Gen. Roussel de Courcy, who was reputed to be one of the most efficient officers in the French army, soon experienced one of those mishaps that have befallen every French general in Tonquin. When he arrived with 10,000 additional troops, the Chinese evacuation was about completed. The French army in Tonquin numbered at this time 35,000 men. He had first to deal with the filibuster state of the Black Flag "pirates," who still disputed the mastery of the French over the Red river country from the delta up to the Chinese frontier. Leaving a good part of his army engaged in the task of subjugating that stubborn people, Gen. de Courcy proceeded with a large force to Hué in order to present his credentials as French resident at the Annamite capital, and to assert in a more practical shape the protectorate for which the way was left clear by the withdrawal of Chinese opposition. Arriving on July 2. he established his abode in the French legation building in the official town. The marines were quartered in thatched huts in the neighborhood of the legation, while the chasseurs and zouaves were stationed in Mongca, on the other side of the barracks of the Annamite soldiery, at the farther end of the long citadel, across the river from the legation, and several thousand yards away. These quarters, at the north end of the citadel, had been imprudently selected by M. Patenôtre for the French garrison in the treaty of June 6, 1884. They consisted of straw huts in a filthy condition, and were separated from the quarters of the Annamite troops by a row of weak breastworks. Suspecting no danger, the French officers took no pains to strengthen this barrier, and were careless about sentry-posts and the intelligence service. Suddenly, at one o'clock of the night after their arrival, the entire Annamite garrison, consisting of about 30,000 men, made a concerted attack on the French troops on both sides of the river. Their highly combustible barracks were first set on fire, some with rockets and some by hand, and then a hot infantry and artillery fire poured in upon them, though without much effect. They were unable to save the soldiers' effects from being burned, but the provisions and ammunition escaped destruction. They held their ground until dawn, and then charged upon the Annamite troops, who, with their usual cowardice, fled in wild disorder. From 1,200 to 1,600 Annamite corpses were left on the ground. The French loss was reported as 72 killed and wounded. Gen. de Courcy had taken the precaution to leave strong posts along the line of communications with the sea-coast. He telegraphed for re-enforcements to come up from Haiphong; and the French took possession of the citadel, in which they found 1,000 cannon.

The rising of the soldiery was deliberately plotted beforehand by the mandarins. Gen. de Courcy had grounds for suspecting the machinations of those bitter and wily foes of French domination. On the 3d and 4th of July he held long interviews with the Annamite ministers, who showed a hostile spirit. After the rout of the Annamite troops the small French force were masters of the town. The French commander hastened to get the person of Regent Thuang into his possession. He induced the regent to sign with him a manifesto denouncing the ministry as guilty of an act of odious aggression, and respectfully summoning the King and the Queen-mother to return to the palace, from which they had fled. The royal palace, which was full of artistic treasures, was guarded by the zouaves. Silver bars, of the value of 5,000,000 francs, were found in the royal treasury, and other treasure of equal amount was discovered subsequently. The Annamite soldiers continued to fire upon them from a safe distance for two or three days. French flying columns patrolled the environs in search of Thuyet, the prime minister, who was the principal instigator of the attack on the French legation and escort. A second manifesto offered amnesty to all rebels who surrendered within twelve days, with the exception of a few of the ringleaders of the plot. The Annamite troops remaining in the city surrendered their arms and disbanded. The first re-enforcements arrived July 10. Thuyet held the person of the King. He was at Camlo with a considerable body of troops. The princes of the blood and the Queen-mother returned to Hué in a few days. Thoxman, uncle to the King Tu Duc, was designated by the royal family sole regent until the King's return. The council was reconstituted. It was made up of mandarins who were friendly to the French. A number of high functionaries chosen from among the partisans of the

French were appointed to assist the ministers. The ministry of war was assumed by the French, and intrusted to M. Campeaux, resident in Hué. The new regent issued a proclamation, ordering all officials in Annam and Tonquin to restore tranquillity, to punish rebels and marauders, and to assist the French army. Por Donghien was occupied by French troops, and all communication between Thuyet's insurgent troops and the Tonquin border cut off, so as to prevent them from forming a junction with the Black Flags. The citadel of Than Hoa was occupied without fighting, about August 24, by a detachment of French marines, with the Tong Doc of Thau Hoa at their head. A military commission was sent out from France charged with the reorganization of the Annamite army.

Massacre of Christians.—The pacification of Tonquin proved a long and arduous task. New difficulties arose continually. The Black Flag rebels received fresh accessions from the disbanded Chinese soldiers. About the 1st of August an epidemic of cholera broke out among the French garrisons in Lam and Haiphong, and with less severity in Hanoi, Chu, and Quan-Yen. In the early part of August the Black Flags raided five missionary stations in the provinces of Bindinh and Phy-Yen, and massacred the priests and native Christians. The French missionaries Poirier, Guegan, Garin, Macé, and Martin, were murdered. As many as ten thousand Tonquinese Christians were reported slain, in a telegraphic message from Monseigneur van Camelbeke, Bishop and Vicar-Apostolic of Eastern Cochin-China, dated Aug. 8. The Vicariate was destroyed, and murders and incendiary fires continued. The superior of the college at Nuonha was murdered with all his assistants and the entire flock of native converts, except those who escaped and wandered for days without food or shelter to places of refuge. Some eight thousand of the followers of the missionaries sought refuge with the French garrison at Quinhon. Many of the Nuonha converts were thrown into the sea with their hands bound behind them. The missionaries defended themselves with muskets until they were overpowered. The military authorities were bitterly blamed by the missionaries and the Catholic priesthood for neglecting to take precautionary measures to protect the missions, and for visiting no chastisement on the fanatical population after the catastrophe. The protection of the missionaries and the native Christians was the original ground for intervention in Annam; yet this protection was denied them, and missionary work was subject to the same dangers and obstacles from native fanaticism as before the appearance of the armed power of France, and the brave priests were exposed to slaughter as a direct consequence of that intervention. Bishop van Camelbeke sent a missionary with the tidings of the massacre to Gen. de Courcy. After he was kept waiting for some time, he was permitted to see the general, who promised to send a gunboat. The gunboat did not reach Quinhon until after the mission was burned to the ground, and then departed without firing a shot, owing to the absence of orders.

Gen. de Courcy telegraphed Aug. 10 that the leaders of the Black Flags had disappeared and their bands had dispersed. But later in the month the bands again appeared and committed fresh depredations and acts of defiance. Phuoc, the chief of the Black Flags, offered his services to the French to suppress piracy and anarchy in northern Tonquin on condition that he should be appointed governor of the district. Gen. Brière de l'Isle, the French commander, refused to treat with him on these terms.

In September Mgr. van Camelbeke reported that two French missiouaries in Annam had been murdered and 24,000 native Christians massacred. The scene of the catastrophe was at Kuang-Tri, capital of the province of the same name, on the border of Tonquin, whither the Regent Thuyet had fled with the deposed King. The massacre was the result of a proclamation of Thuyet calling upon the people to exterminate the French and their partisans. The fugitive minister and King then crossed over into Tonquin and joined the camp of the rebels and Black Flags on the Songkoi.

In the beginning of January Gen. Négrier, without waiting for re-enforcements, advanced upon the Chinese about 100 miles eastward of Chu. On Jan. 3 he defeated a body of 6,000. The Chinese troops, to the number of 12,000, returned to take the offensive, but after a hot conflict were repulsed and completely routed. The French drove them from their fortified position, which was defended by forts, with rows of batteries rising one above another. Two batteries of Krupp guns, a quantity of rifles, ammunition, provisions, and the Chinese standards and convoys, were abandoned. The Chinese lost 600 killed and many wounded. The French loss was 19 killed and 68 wounded.

In October Gen. Jaumont attacked the fortified town of Thamnoi, one of the principal strongholds of the rebels, held by 6,000 Black Flags, Annamite rebels, and Chinese deserters. The enemy made a stubborn resistance, but were completely routed after three days' operations.

The Enthronement of a New King.—When Gen. de Courcy first went to Annam, he sought permission to effect the definitive annexation of the Annamite dominions. The Government, warned by the fate of the preceding Cabinet, and by the growing unpopularity of the enterprise in Farther India, was unwilling to plunge into fresh adventures, and therefore vetoed the bold project of tearing up the treaty concluded the year before and infringing the terms of peace just made with China. The result of Gen. de Courcy's stormy interviews with the Regent and ministers was the surprise at Hué.

This altered the situation in the minds of the French ministers, for it was now a question of risking the position already attained or of tightening their grasp. They accordingly gave their chosen general entire discretion, when he proposed to dethrone King Tu Duc, who had escaped with the recalcitrant mandarins. The Prince Chaul Mong, adopted son of Tu Duc, a young man of twenty-three years, was selected to wear the crown. On the 14th of September, "in compliance with the repeatedly expressed wish of the royal family and the Governing Council," he was formally installed as King of Annam. French and Annamite troops lined the route of the procession, and the French and Annamite flags waved over the Miradores Palace. The coronation took place with pompous ceremonies on the 19th. The reconstituted Government began its regular functions. The new King assumed the name of Douck Hanh, signifying the "union of two nations." He was the fourth King, "devoted to the interests of France," placed upon the throne by the French within three years. This act raised anew the question of Chinese suzerainty, which has never been abandoned by China, and which was left untouched in the treaty.

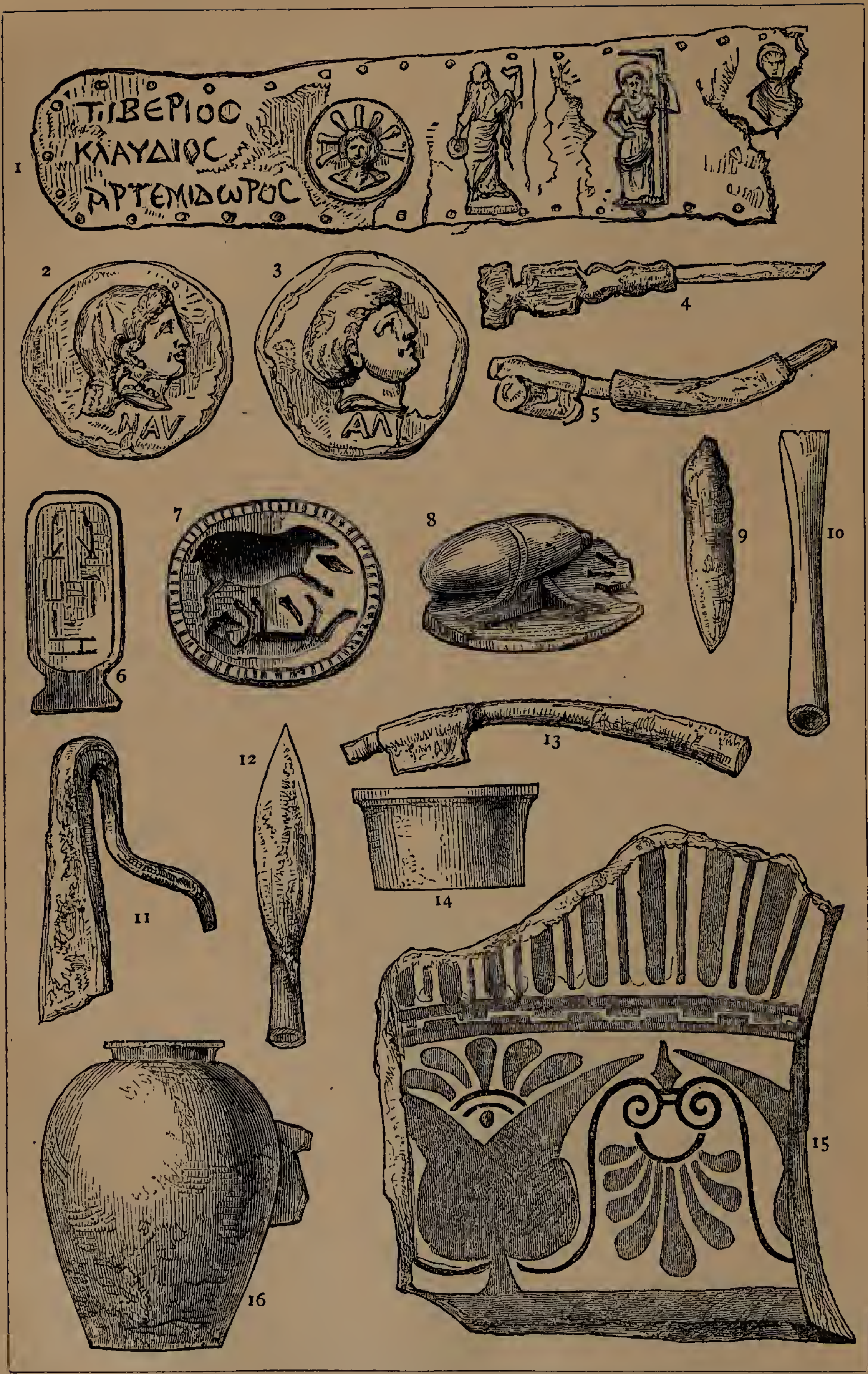
ARCHÆOLOGY. (Egyptian.) The Great Temple of Luxor.—The great Temple of Luxor, standing almost immediately on the banks of the Nile, and surrounded by the public offices and the hotel, is the most accessible and most familiar of the six temples on either side of the river that constitute the more prominent objects of the ruins of Thebes. The oldest part of this temple was built, so far as has been ascertained, in the reign of Amenhotep III, the ninth Pharaoh of the eighteenth dynasty, at about (according to Manetho's and Mariette's chronology) 1530 B. C. It was added to and maintained by succeeding sovereigns, particularly by Horemhebi and Rameses II, down to the time of Ptolemy Lagus, 312 B. C. When perfect it was about eight hundred feet long. For several centuries it has been the site of a native village, under whose accumulated rubbish it has been buried to a depth of from forty to fifty feet, the latter having been, in 1884, the height of the surface within the building above the original pavement. The roof of the portico is still nearly perfect, and so solid that it has borne for a hundred years the weight of the large house called the "Maison de France." After about two years of effort, M. Maspero succeeded in obtaining permission from the Egyptian Government to buy out the properties of those persons whose homes and estates were situated upon the temple, with a view to excavating the ruins, and securing their preservation from further destruction, and orders were given in July, 1884, to begin operations. These orders could not, however, be carried into effect, on account of the difficulty of removing the population, till Jan. 5, 1885, from which time a force of an average of 150 laborers was employed till the 26th of February, when M. Maspero made his report of progress. He had then completely cleared the great roofed sanctuary of Amenhotep III, and exposed the columns of the central colonnade for two thirds of their height; discovered a small portico, hitherto unknown, of the time of Rameses II; found several colossi, some prostrate and some still erect on their pedestals; and brought to light some remains of a great quay, inscribed with the names and titles of Amenhotep III. In the course of another month, during which M. Maspero continued the excavations, he cleared the columns of the court of Amenhotep to their bases, partly laid bare the ancient pavement, and opened "a magnificent vista" from the portico at the southern end to the great entrance pylon at the north. The design of the columns of Amenhotep III is described as "one of the most beautiful among the orders of Egyptian architecture. It conventionally represents a bundle of lotus-plants, stalks and buds; the stalks bound together at the top by a ligature, and the cluster of buds forming the capital. Upon the abacus of each capital is sculptured, in hieroglyphic characters, the name of Amenhotep III (popularly known as Amenophis), inclosed in a royal oval." The excavation of the great colonnade of Horemhebi, the only part of the temple that was visible from the dahabeeyahs on the Nile until the present operations were executed, is still prevented by the refusal of the British consul to surrender his premises. This structure consists of fourteen sandstone columns, standing two deep, which, if excavated to their bases, would measure about fifty-seven feet in the shaft. M. Maspero has ascertained that the temple, when first constructed, was not separated, as now, from the Nile by the extensive space of the shore-slope, but rose direct from the water's edge, like the covered gallery at Philæ. And he affirms, in his report of Feb. 26, "that Luxor, freed from the modern excrescences by which it has hitherto been disfigured, is, for grandeur of design and beauty of proportion,

COLONNADE OF HOREMHEBI.

almost the equal of Karnak. The sculptures with which the chambers and columns are decorated are of most fine and delicate execution, while some of the wall-subjects would not suffer in the comparison if placed side by side with the choicest bas-reliefs of Abydos."

Necropolis of Ekmeen.—Of the cemetery of Ekmeen, which M. Maspero discovered in 1882, he says in his report for 1885: "No cemetery ever better deserved the name of necropolis. It is really a city whose inhabitants may be counted by the thousand, and have risen in their turn at our call for fifteen months without their number seeming to diminish; not only is it bored with pits and chambers, but all the natural fissures and faults of the limestone have been utilized for the deposition of bodies." Mummies, swathed but coffinless, are piled up in regular layers, like wood in dock-yards; and on top of these, mummies in wooden cases have been piled up to the ceiling, the topmost ones being jammed in without regard to the damage they might suffer from rubbing. The close crowding of the bodies could not have been explained without information from contemporary documents respecting the manner in which the care of the dead was provided for. Persons of moderate fortune and of the middle classes intrusted the mummies of their relatives to undertakers, affiliated with the priesthood, who lodged them in store-houses, and in consideration of an annual rent obligated themselves to take care of them and perform the prescribed services over them on the appointed days. When the rent ceased to be paid, the mummy-keepers would send them away. In a quarter of the cemetery occupied by families that were contemporary with the Antonines, the mummies seemed to be of an entirely new type. Most of them represent the corpse clothed in festal garments and reveal its exact form, as if made in a mold of it. In the mummies of the women particularly, the smallest details of the body under the vestment are exhibited with a curious distinctness.

Naucratis and its Græco-Egyptian Relics.—Mr. H. Flinders Petrie began his second season of work under the direction of the "Egypt Exploration Fund" late in the autumn of 1884, at Nebireh, a place that he had previously observed, and had mentioned in his address at the meeting of the Fund, as "a promising Greek site." It is a short distance northeast of the station of Tell-el-Barud, on the railway from Alexandria to Cairo. He had not been long at work there before he found an inscription recording certain honors that had been conferred upon one Heliodorus, a deserving citizen, a priest of Athena, by the city of Naucratis; and this, with other Greek inscriptions and objects which he afterward found, led him to suppose that the place might be on the site of the ancient Greek emporium of Naucratis, which reached its culmination as a center of Grecian civilization and a commercial mart in the age of Amasis. Further investigations have confirmed his opinion, and established it almost to a certainty. Though the city of Naucratis held a very important position during the later Egyptian dynasties, it had disappeared in the time of Commodus, and its site was wholly unknown and hardly conjectured until Mr. Petrie came upon it almost by accident in 1884. During the working season of 1885 the greater part of the mound of Nebireh was trenched, cleared, and thoroughly explored; and it has yielded a multitude of treasures of early Grecian and Græco-Egyptian art. Among the buildings discovered were the sites and ruins, with their sacred inclosures, of two temples dedicated to Apollo; one built of limestone, and assigned, from its architectural peculiarities, to between 700 B. C. and 600 B. C.; and the other, of white marble, exquisitely decorated, which is assigned to about 400 B. C. Outside the temenos-wall of one of these temples was a deposit of magnificent libation-bowls, which had been broken in the service and thrown out as useless, most of which were inscribed with votive dedications by pious Milesians, Teans, and others. A bowl dedicated to Hera, one to Zeus, and several to Aphrodite, were found, but the sites of the temples of those deities have not yet been identified. Other objects, the discovery of which goes to confirm the identification of the place, are, a fine inscribed stone commemorating the dedication of a palæstra; a collection of weights; coins of Ægina, Samos, Chios, and Athens; and a copper piece, the designs and inscriptions on which indicate that it was a coin of the confederate cities of Alexandria and Naucratis, struck at the time of the revolt during the minority of Ptolemy V. The lines of the ancient streets of the town have been traced, and the position of the Agora defined. Under the highest part of the mound was excavated an immense building, erected as a kind of platform and containing many chambers on two levels. The lower series of chambers have no doorways, but were apparently entered from above, after the manner of the ancient Egyptian store-houses or granaries; while the chambers on the higher level, none of which communicate with one another, open upon a series of intersecting corridors or passages. This is supposed to have been some kind of store-house, or a depot for the reception of foreign goods; or, perhaps, the Hellenium, a building erected by the subscriptions of many Greek cities for purposes partly commercial and partly religious. Votive deposits were found at the four corners of the entrance-gateway of the inclosure surrounding this building, consisting of miniature libation-vases and cups in porcelain; alabaster jugs and limestone mortars; trowels, chisels, hoes, and knives, in bronze and iron; bricks of mud, limestone, and porcelain; ingots of silver, copper, iron, and tin; specimens of leaf-gold; and tiny plaques of jasper, lapis lazuli, turquoise, agate, quartz, and obsidian. With these were found some small cartouch-



ARTICLES FOUND AT NAUKRATIS.

1, Bandeau of gold, with figures of Helios, Hygeia, etc ; 2, 3, Coin of Naukratis and Alexandria; 4, Knife; 5, Axe; 6, Cartouche of Ptolemy II, founder's name; 7, 8, Porcelain Scarab, of Greek workmanship; 9, Alabaster Peg; 10, Chisel; 11, Adze; 12, Trowel; 13, Hatchet; 14, Cup; 15, Fragment of painted Vase; 16, Vase.
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tablets in lapis lazuli, engraved with the name and titles of Ptolemy II, who must therefore have been the founder of the building. This is the first and only instance of foundation deposits yet observed in Egyptian soil.

One of the chief points of interest in the discovery of Naucratis lies in the light it throws upon the progress of the ceramic art. Naucratis was a city of potters, and, according to the testimony of Athenæus and others, enjoyed a great reputation. The mound of Nebireh has been found to be "a vast pile of potsherds, deposited in strata as well defined and as strictly capable of chronological classification as the strata in a geological diagram. Mr. Petrie has trenched through and cleared away these strata, going sometimes to a depth of six feet below the hard mud at the bottom. Each layer has thus in turn rendered up its story, and the story in each layer proves to be a chapter in the history of Greek art. Now, for the first time, every link that connects the pottery of Greece with the pottery of Egypt is brought to light. That connection is not one of partnership, but one of descent." Among the figured wares designed here are the earliest examples yet discovered of the pattern commonly known as the "Greek honeysuckle." But this ornament, as shown in its most archaic stage, proves to be no honeysuckle at all, but a new and fanciful rendering of the old Egyptian lotus pattern, as freshly conceived and idealized by the Grecian artist.

One very curious object in the collection is a fragment of a shell, known as the *Tridæna squamosa*, which is not found in the Mediterranean, but has its habitat in the Persian Gulf and along the Indian coasts. This specimen is engraved with the Assyrian sacred tree and other cognate ornaments. Similar specimens similarly decorated have been found at Nimrûd, Bethlehem, Canino, and Vulci. The discovery of a fragment at Naucratis, says Mr. R. S. Poole, adds one more link to the chain, and we can hardly resist the conclusion that all these shells were imported by the Phœnicians by the trade routes of the Red Sea, and afterward formed articles of barter in their traffic with the Greeks and Etruscans, at least as early as 600 B. C., or even earlier. Among other noteworthy objects is a headless figure of a girl, ornamented with flower-wreaths, which remind us that the weaving of garlands was a well-known craft at Naucratis. Of other figures in limestone, alabaster, and terracotta, some recall Rhodes or Cyprus, others are purely Greek, and others again are Græco-Egyptian. The inscriptions upon the Apollo-bowls already mentioned are traced in letters of that early Ionic form which is found in the celebrated inscription of Psammeticus, son of Theocles, on the leg of one of the colossi at Abû-Simbel. The same form is again met with upon the archaic sitting figures from the Sacred Way at Branchidæ which are now in the British Museum. Remark is made upon these resemblances as indicating that the desertion of the 240,000 mercenaries and the making of the Sacred Way at Branchidæ were probably coincident with the palmy days of Naucratis. A collection of the potteries and other objects found at Nebireh has been placed on exhibition at the rooms of the Archæological Institute in London. The Egypt Exploration Fund has been aided in making the explorations of Naucratis by the Society for the Promotion of Hellenic Studies.

The Identification of Pithom.—M. Edouard Naville, working under the auspices of the Egypt Exploration Fund, at the mound known as the *Tel-el-Mashkutah* (the Mound of the Statue) in the Wady-et-Tumilat, in 1883 (see "Annual Cyclopædia" for 1884), found evidence there of various kinds which led him to identify that place with the site of Pithom, one of the treasure-cities that the children of Israel are recorded in the first chapter of Exodus as having built for Pharaoh, and with the Heroöpolis of the Grecian period. The correctness of this identification has been the subject of a discussion, in consequence of which the points of evidence in its favor have been presented in a strong light. One of the last papers written by Lepsius before his death was a review of M. Naville's account of his excavations, published in the "Zeitschrift für aegyptische Sprache und Alterthumskunde," maintaining that the monuments discovered by M. Naville belonged to Ramses, the other treasure-city built by the Israelites, and not to Pithom. It had been the opinion also of other Egyptologists who had inquired into the location of the two treasure-cities that *Tel-el-Mashkutah* was Ramses: among these was Miss Amelia B. Edwards, who had published a series of articles sustaining that view almost simultaneously with M. Naville's excavations; and Herr Brugsch, who had located Ramses there in his Egyptian geography. Both of these authors, however, were convinced by M. Naville's discoveries, and surrendered their own views to his identification of the place with Pithom. The surrender in the case of Herr Brugsch was all the more significant as to the force of M. Naville's evidences, because it compelled him partly to give up and wholly to revise his theory of the route of the Exodus which he had studied out with much care and had published several years before. M. Eugène Revillout, editor of the "Revue Egyptologique," in reviewing the question, calls attention to the fact that where, in Gen. xlvi. 28, the meeting of Joseph and his family in the land of Goshen is described, the Septuagint reads ʽΗρώων πόλιν εἰς γῆν Ραμεσσῆ, and the Coptic, "at the city of Pithom in the land of Ramses." Dr. Georg Ebers, while he admits that Egyptologists, including himself, had regarded Tel-el-Mashkutah as the site of the biblical Ramses, adds, "After the appearance of M. Naville's book, however, there will scarcely be found a single Egyptologist who will still adhere to this view, and refuse to look upon Tel-el-Mashkutah as the site of the Egyptian town which bore the sacred name of Pithom and the profane one of Thuku-t." And Dr. Ebers and M. W. Pleyte, of Leyden, do not hesitate to affirm that the arguments of Lepsius are more than met by the evidence produced by M. Naville in his book. It is also said that Lepsius had not seen the whole of M. Naville's evidence when he wrote his article. Among the most positive points of this evidence is the discovery of what may very likely have been the store-houses built by the Hebrews, in the remains of a series of chambers having no communication with one another, and to which access could be had only by the roof, and corresponding in their construction exactly with the representations of corn-magazines found on the monuments. This would lend a striking confirmation to the identification of the site with that of one of the treasure-cities. Another evidence corroborating the exact identification with Pithom is afforded by a stela of the Ptolemaic period found there, which bore the inscription, "When under his Majesty it was proclaimed, now the sanctuary of his father Tum of the good god of Thekut was completed, on the third of the month of Athyr, the king himself came to the district of Heroöpolis (in the presence or into the house) of his father Tum," etc. The name Thekut in this inscription corresponds with the profane name (Thuku-t) of the place as given by Dr. Ebers, and is regarded by M. Naville as the Succoth of the Exodus; the Egyptian *th* being represented in several instances by *s* in other languages. Further confirmation of the supposition that Thekut and Pithom are the same is afforded by a passage in the Anastasi papyrus, where King Menephthah tells in writing of having permitted the Shasu of Atuma to cross the fortress bearing his name, which was also called Theku, "in the direction of the ponds of Pithom of the King Menephthah, which is, or is called, Theku."

M. Naville's Search for Goshen.—A monolithic shrine in black granite was found about twenty years ago at the village called Saft-el-Henneh, about six miles east of Zagazig, and was broken to pieces by order of the pasha, with the expectation of finding treasure within it. Two of the fragments of the shrine were carried to the museum at Boolak, and two were left on the spot. From a study of the fragments at Boolak, Herr Brugsch learned that the shrine was of the reign of Netanebo II, of the thirtieth dynasty, and that it was dedicated to the god Sopt, the chief god of the nome of Arabia, whose name still survives in Saft, the name of the village. Several authorities say that the nome of Arabia was the site of the land of Goshen, and that land is called in the Septuagint Γεσὲμ Ἀραβίας, Gesem of Arabia. We also find in the hieroglyphic lists that describe the nomes the mention of Kesem of the East as one of the localities of the nome of Arabia. This Kesem has been considered by most Egyptologists as the land of Goshen. M. Naville visited Saft during his explorations of the Delta, in December, 1884, and, examining the fragments of the shrine that were still left there, found on one of them a dedicatory inscription, in which were the recitals, "The king came to Kes in order to make offerings to the venerable god Sopt on his throne," and that "the images of the gods of Kes, together with this shrine, were created under the reign of the king." The name Kes being regarded as a variant of the Kesem of the Ptolemaic lists, M. Naville considers that the facts fix the site of the land of Goshen as being in the country around this place. The town of Fakoos, twelve miles north of Tel-el Kebir, has generally been regarded as the Goshen of the Bible, from the similarity of the name with Phacusa, which Ptolemy gives as the name of the capital of the Arabian nome. But M. Naville refers, as against this view, to a statement of Strabo, that Phacusa was the starting-point of the canal that ran from the Nile to the Red Sea. No trace of a canal has ever been found in the region between Fakoos and the Red Sea; while if Phacusa was in this neighborhood, explored by M. Naville, the starting-point indicated by Strabo would be only a few miles east of that given by Herodotus, and the canal mentioned by him could only be the same that is described by Diodorus, Pliny, and others.

(Grecian.) The Acropolis of Athens.—Excavations on the Acropolis of Athens have resulted in the discovery of various sculptures and architectural fragments belonging to the older Greek art. Among them are dedications and names of sculptors of the pre-Euclidean period, and works that were originally richly decorated in color. At different points have also been uncovered portions of the old Pelasgic wall and joinings of the same with the walls of Cimon, and remains of the old walls of Themistocles. Among the inscriptions brought to light is one containing the reception of the different properties of the precincts of the temples of Athens. In digging for the foundations of a new house to the south of the Acropolis, on the site of the city of Athens, previous to the improvements made by Themistocles, an inscription, belonging to the fifth century B. C., was found entire. It was an order for an inclosure to be made around the Temple of Codrus, and for some two hundred olive-trees to be planted within it. The inscription is of interest as conveying the first information that there was a temple in Athens dedicated to Codrus. Excavations have been begun in behalf of the Society of the Dilettanti on the site of the Temple of Zeus Olympios. The foundations of the pillars of the temple have been reached in several places and found to be in a condition of great disorder, having been in some points ruthlessly thrown down and in other cases completely obliterated. Excavations were begun in July on the site of the ancient Agora of Athens.

The Naval Arsenal of the Piræus.—In the exploration of the Piræus a building has been uncovered which is described as a long parallelogram, open in front, where it faces the sea, and shut in behind by a wall of fine squared masonry. It is divided into compartments by rows of three pillars, and an abutment in the wall behind, placed about twenty-five feet apart, some of which pillars are still standing, but broken off at about four feet from the ground. The space between the rows of pillars is filled by a mass of masonry, which slopes toward the sea, while piers of stone of the same inclination, running straight out from the shore, can be seen in the water all round the harbor, in some cases exactly opposite the inclined planes visible on the land above. The object of these structures was evidently to enable the sailors of the Athenian fleet to draw up their galleys on to dry land for the winter; and the building was one of the naval arsenals called *νεώσοικοι.* Another straight wall, but of inferior masonry and apparently of great length, appears imbedded in the cliff above, and is to be cleared.

Continued Excavations at Tiryns.—Excavations have been continued on the site of the ancient fortress palace of Tiryns, which, as its age may be probably fixed at a thousand years or more before the Christian era, may be regarded as the oldest building in Europe. On the walls, which are from thirty to forty feet thick, have been discovered an outer staircase of sixty steps, very low and easy of ascent, and a row of rudely vaulted chambers built in the thickness of the wall, at about twenty feet above the ground. The half-dozen rooms that have been laid bare on the east side of the building are vaulted without key-stones by the aid of unhewn rocks closely fitted together and shelving inward. An irregular crevice was thus left along the top, which admitted light, and perhaps allowed the escape of smoke; but the rudely fitting walls of this primitive roof had in time given way to pressure, and, falling in, filled the rooms underneath with rubbish. On a hearth have been discovered some unconsumed wood-cinders, looking like fresh charcoal.

Temple of Apollo at Mount Ptoum.—The walls of the Temple of Apollo at Mount Ptoum, in Bœotia, have been discovered by M. Foucard, of the French School, but with the foundations greatly disturbed. A fine life-size statue in archaic style of the god, of which the feet only are wanting, a head of Apollo of heroic size, and parts of other sculptures, have been recovered. Among the inscriptions are one belonging to the Bœotian confederation, and others giving a list of magistrates and the names of various artists of the sixth century B. C. The votive offerings show that musical contests took place on Mount Ptoum every fifth year.

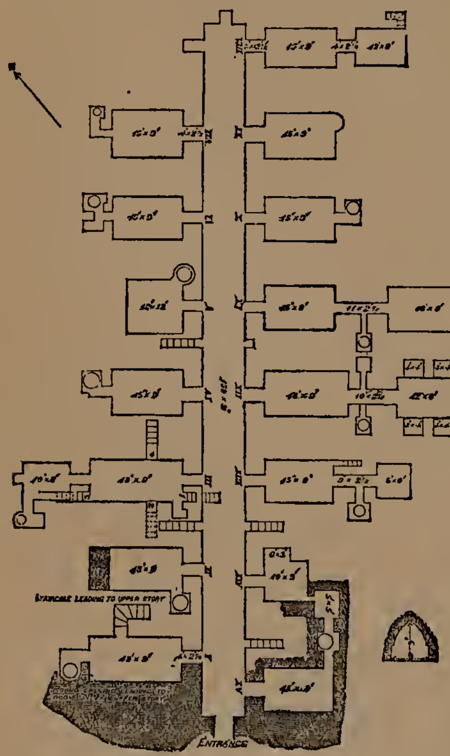
The Inscription of Gortyna.—Dr. Halbherr has discovered at Gortyna in Crete a fragment of an inscription built into a wall, in archaic letters and a Doric dialect, of about 500 B. C., which proves to be part of a law of penalties for debt and of a law of inheritance. Other fragments of the same inscription are in the Museum of the Louvre, so that it may be possible to reconstruct it nearly entire.

The Stone from Cana in Galilee.—Excavations carried on by the French School of Archæology around the Temple of Athene Cranæa, at Elatea, in Phocis, brought to light, in the ruins of the Church of the Mother of God, a block of white-gray marble about four and a half feet long, twenty-five inches broad, and thirteen inches high, bearing the inscription, which is assigned to the sixth or seventh century of the Christian era:

+ ΟΥΤΟϹ ΕϹΤΙΝ Ο ΛΙΘΟϹ ΑΠΟ ΚΑΝΑ
ΤΗϹ ΓΑΛΙΛΕΑϹ ΟΠΟΥ ΤΟ ΥΔΩΡ ΟΙΝΟΝ
ΕΠΟΙΗϹΕΝ Ο $\overline{\text{ΚϹ}}$ ΗΜΩΝ $\overline{\text{ΙϹ}}$ $\overline{\text{ΧϹ}}$ +

M. Diehl, of the French School, translates this inscription, "This is the famous stone from Cana in Galilee, where our Lord Jesus Christ turned the water into wine." M. Spyr. P. Lambros, of Athens, would translate the first words to mean, "This stone comes from Cana in Galilee," etc. Concerning the probable origin of the stone, it has been observed that various monuments connected with the presence of Christ there were carefully preserved at Cana, and regarded with devotion by pilgrims. Some of these relics were removed to western countries as early as the fifth century, and before the thirteenth century all had gone from there. Among the pilgrims who have described these objects was Antoninus of Piacenza, who, in the sixth century, saw two of the pitchers in which the miracle of the conversion of the water into wine was said to have taken place, and even declared that he had himself drawn from one of them wine instead of the water which had been put into the vessel. He also relates, in his "Itinerarium," that he saw the couch on which our Lord reclined at the wedding, sat in it, and inscribed the name of his family upon it. A commission was appointed by the Greek Government to examine the stone and the inscription, one of whom, W. Dörpfeldt, has expressed the opinion that the stone originally formed part of a chair, and was accompanied by other similar stones. M. Diehl described the stone as bearing, when he found it, the remains of another smaller inscription, of which he deciphered the words *τῆς μητρός μου Ἀντωνίνου.* M. Lambros asserts, however, that he was not able to find this inscription. The church in which the stone was discovered was found to have been built upon the site of an ancient temple, of which a part of the ruins were exposed. The excavations of the Temple of Athene Cranæa (so called from the name of the hillock, Cranæ, on which it was built) revealed the ruins of a very beautiful building, of Doric architecture, about a hundred feet long and forty feet wide, which had suffered from earthquakes and from a conflagration. From the excavations in it have been taken a considerable number of objects of architecture and art, including fragments of columns, parts of the statue of Athene, which agree with the description of the work given by Pausanias, pieces of sculpture, grave-stones, clay jars, tiles, some bits of work of Christian art, numerous inscriptions, including a fragment of an edict by Diocletian, fixing the maximum of prices in the Roman Empire; and terra cotta-figures, of which six hundred were found in the temple alone.

(Buddhist) Cave-Dwellings on Murghab River.—Capt F. de Laessoë has described several caves of different dimensions, which were excavated for habitation, in the sandstones of the right bank of Murghab river, near Penjdeh, in Afghanistan. One, which he explored in the hill called the Yaki Deshik, was an elaborate structure. It stands about two hundred feet above the river, in a waterless hill, and has rooms communicating with one another, on two levels. The principal part of the cave is shown in the annexed plan. A central passage one hundred and fifty feet long, nine feet broad, and nine feet high, has on each side a number of staircases and doors leading to rooms of different sizes, but all excavated on the same principle. The passage and rooms are vaulted and of a uniform height of nine feet to the top of the vault, which starts from a slightly projecting edge about four feet from the floor. The top is marked in its whole length by an incision one inch broad and halt an inch deep. Walls and roof are finely and elaborately cut with a pickaxe, and in some of the rooms the walls are divided into square panels, and the roofs into bands or stripes two feet broad, every second panel or band standing out in relief. Each room has attached to it a small, usually square chamber, with a round well from eight to ten feet deep, and about two and a half feet in diameter, to which, possibly, water was carried up from the river to be stored. The entrance leading from the central passage to each room is about four feet long, two and a half feet broad, and two feet high. Each entrance has been shut by folding-doors on wooden hinges, of which nothing remains; but the socket-holes of the hinges and a hole for the admission of the arm behind the door to draw back the bolt are plainly to be seen. The upper story is much less extensive than the lower story, having only three large rooms, with a few smaller ones. Communication was had between it and the lower story by several staircases and other means. In the principal room, which is cruciform, the central vault is round, while all the other vaults in the cave are pointed. The shading in rooms II and XII in the engraving marks a shelf of rock or low ledges separating the recessed apartments from the main room to which they are attached.



YAKI DESHIK CAVES (LOWER STORY).

The central passage of the caves is dimly lighted from the entrance, and the floor slopes upward, so that the farther end is about ten feet higher than the entrance. Small cuttings in the walls of each room, particularly above the entrance, appear to have been designed to give room for small lamps. The walls around some of these cuttings were still slightly tinged with soot. No inscriptions or carvings were found anywhere. The floors of some of the rooms were entirely covered with the excrement of leopards. The head of a fox was found in one of the wells. Otherwise, the caves were empty, but well preserved. Coins, apparently Mohammedan, of the twelfth century, were found in one of the rooms of the upper story, but about half-way down in the sand, in such a position as to show that they had been left there after the caves had been abandoned, and had become partly filled with sand. These caves are the most extensive in Penjdeh, but many other caves, similarly constructed, though containing fewer rooms, are found all along the valley. At one of the caves the cliff was so well preserved as to show how access was gained. Two parallel rows of incisions led from the entrance of the cave down to a shelf of rock, which could be reached without much difficulty from below. By suspending a rope from the cliff above the entrance, and afterward from the entrance itself, the incisions could be used as steps while the rope was held with both hands, and climbing was comparatively easy. The caves are supposed to have been inhabited by Buddhist ascetics, and are ascribed by Sir Henry Rawlinson — the majority of them—to the first century of Christ, when the great immigration took place of the Indo-Scythic tribes, who were all zealous Buddhists. Rawlinson thinks it is possible, however, that some of the excavations may be still older than this; for there were Sacæ in the mountains as early as the time of Darius, and the Chinese pilgrims refer to monuments at Balkh, which date from Kasyapa, who was the Buddha preceding Sakya Múni.

ARGENTINE REPUBLIC, an independent republic of South America. For details of area, population, etc., see "Annual Cyclopædia" for 1883. The present population of the capital, Buenos Ayres, is estimated at 400,000; in February, 1884, it numbered 283,758.

Government.—The President of the Republic is Lieut.-Gen. Don Julio A. Roca (elected Oct. 12, 1880, for six years). The Vice-President is Don Francisco B. Madero. The Cabinet was composed of the following ministers: Interior, Dr. Don Benjamin Paz; Foreign Affairs, Don Francisco Ortiz; Finance, Don Victorina de la Plaza; Justice, Public Worship, and Public Instruction, Don Eduardo Wilde; War and Navy, Gen. Benjamin Victorica.

The Argentine Minister at Washington is Dr. L. L. Dominguez, and the Consul-General at New York, for the Union, is Señor C. Carranza. The United States Minister Resident at the Argentine capital is the Hon. Thomas O. Osborn, and the American Consul at Buenos Ayres, E. L. Baker.

Army.—According to official returns, bearing date of April, 1884, the army of the republic, exclusive of the National Guard, was 7,312 strong, comprising 3,704 foot, 2,576 horse, and 1,032 artillery. The National Guard was 322,962 strong.

Navy.—In April, 1884, the navy was composed as follows:

STEAMERS.	No.	Guns.	Tonnage.	Horse-power.	Crew.
Ironclads.........	3	26	7,600	6,000	484
Gunboats	6	16	2,400	1,950	456
Torpedo-boats....	7	2	400	325	116
Transports........	2	2	1,150	880	119
Cruisers..........	3	3	240	150	60
Other steamships.	6	..	120	60	89
Sailing-vessels....	12	6	720	....	181
Total.........	39	55	12,630	8,865	1,505

The officers and men are distributed as follows: navy, 1,366; torpedo service, 137; marines, 371.

Finances.—On Jan. 1, 1883, the public debt consisted of the following items:

Foreign debt..	$58,035,600
Home debt..	36,530,188
Due banks..	10,052,406
Treasury acceptances, due........................	4,192,185
Floating debt of 1830...........................	15,302,305
Total..	$124,112,683

The debt of the province of Buenos Ayres on March 31, 1884, was $32,271,290. The net income and outlays in 1882 were: revenue, $24,323,127; expenditures, $52,331,241. The budget estimate for 1884 was: revenue, $33,770,333; expenditures, $34,053,484. In the foregoing estimate the income from duties was valued as follows: on imports, $21,270,333; on exports, $3,593,000; from stamp-tax, $1,500,000; post-office and telegraphs, $760,000; lighthouses, $600,000; direct taxes, $1,150,000; from railroads owned by the Government, $1,957,000; and from railroads on which the Government guarantees the interest, $500,000. The chief items of expenditure were: Interior, $6,950,714; Army, $6,150,925; Navy, $2,549,538; Justice, $4,291,671; finances, $13,738,936. The budget of the province of Buenos Ayres for 1885 estimated the income at $11,620,964, and the outlay at $11,491,556.

The Financial Crisis.—After Gen. J. A. Roca was elected President of the Republic, the confidence that his character and energy inspired gave a great impulse to all sorts of undertakings, both public and private, and new settlers poured into the country in surprising numbers. Railroad-building was carried on with more vigor than ever. Flushed with success, the Government launched out into public works at such a rate that since 1881 the administration has contracted $125,000,000 of new indebtedness, despite the rapidly increasing income. Aside from the Federal Government, each of the fourteen provinces had its own budget.

In 1884 several disappointments came. In the first place, there was the cholera, which compelled the Government to decree a rigorous quarantine against Mediterranean steamers bringing immigrants, which, to some extent, interfered with the usual current of new settlers from southern Europe. Then came the disastrous inundations that flooded the country during the latter part of the year, and hindered the arrival of products from the interior. Merchants hesitated to ship even the goods they had, because there was pending in Congress a bill abolishing export duties, and there was considerable delay in passing this bill.

On Dec. 1, 1884, $90,000,000 new loans were still to be floated. The European market was tried with $10,000,000 for public works, but only $3,500,000 could be placed. On Jan. 12, 1885, a run on the Banco Provincial, of Buenos Ayres, set in; the next day the bank suspended specie payments, and on Jan. 16 the President of the Republic declared the national currency a legal tender, gold rising thereupon 17 per cent., and subsequently to 20 per cent. With these measures the panic subsided. In July, 1885, Congress passed the new budget estimate for 1886, which placed the income at $41,197,500, and the outlay at $39,433,877, and Dr. Carlos Pellegrini succeeded in negotiating a 5 per cent. sterling loan in London at 84, to run thirty-seven years, for £8,400,000, but it was not ratified.

At this time the floating debt of the Government amounted to $30,000,000, and it was resolved to raise a domestic 5 per cent. loan to the amount of $20,000,000 in order to meet its more pressing liabilities.

In February the gold premium reached 33 per cent.; in March, 61; in April it receded to 41 per cent., and recovered to 50; in May it fluctuated between 36 and 44; in June, between 30 and 65; in July, between 36½ and 37, and reached again 45½ to 46 on Aug. 31.

Post-Office.—In 1884 the post-office of Buenos Ayres handled 18,000,000 items of mail matter, and during the first six months of 1885, 10,000,000; whereas in 1865 the number was but 1,000,000, and in 1875, 7,000,000. There is a mail leaving for and arriving from Europe nearly every day. All mails for the United States go and come by way of England, because of the lack of direct steamship communication.

Railroads.—There were in operation in 1884 the following lines of railway:

Lines.	Kilometres.
Private:	
Buenos Ayres to Tandil	1,016
Nueve de Julio to Temperley	691
To Tigre	30
To Ensenada	56
To Campana	81
Mercedes to Chacabuco	108
Rosaria to Córdoba	396
Rosaria to Candelaria	60
Concordia to Monte Caseros	155
	2,593
Government:	
Villa Maria to Mendoza	599
Córdoba to Tucuman	546
Frias to Santiago del Cestero	162
Puerto Ruiz to Gualeguay	10
Total	3,910

There were in July, 1885, five street railway companies, with 93 miles of track, carrying 1,850,000 passengers monthly.

Telegraphs.—There were in 1884 six Government land lines of telegraph, with a length of wire of 21,278 kilometres, 286 offices, and 856 telegraphers, besides 85 kilometres of cable and 8 private land lines with 4,758 kilometres of wire, 105 offices, and 157 employés, besides 63 kilometres of cable. In June, United States Minister Osborn, acting in accordance with instructions received from the State Department in Washington, concluded a contract securing to the Central and South American Telegraph Company a concession to establish cables between Buenos Ayres and Rio Janeiro, and land lines between Buenos Ayres and the Pacific coast.

Owners of plantations mostly reside in Buenos Ayres, and have telephone wires between their offices and their plantations. There are more telephones in use in the city in proportion to its size than in most other cities.

Stock-Farming.—In the central region of the republic are vast plains, where feed over 80,000,000 head of sheep and from 16,000,000 to 18,000,000 head of cattle, in addition to droves of horses in uncounted numbers. One owner has over 60,000 mares that he is about to slaughter for their hides and grease.

To convey an idea of the comparative importance of the La Plata region as a wool-producer, and the rapidity of increase, we give in millions of pounds English, reduced to clean wool, what the three chief producing regions have turned out during the past four years:

COUNTRIES.	1884.	1883.	1882.	1881.
Australasia	224½	198¾	197½	179
Cape of Good Hope	39¼	39½	38½	40
La Plata	102¾	96¼	93¾	83½
Total	366½	334½	329¾	302½

In 1884–'85 the Argentine clip furnished for export 283,000 bales, against 254,000 in 1883–'84. Australians confess that the chief reason why their wool does not bring, on the whole, as good prices in London as formerly, is to be found in the steady improvement that is taking place in the quality of Argentine wool.

Mutton.—In September a company was formed in Hamburg for the purpose of importing mutton from Buenos Ayres in refrigerator steamers, the capital being fixed at 1,000,000 marks. The company expects to import 120,000 carcasses annually.

Commerce.—The foreign trade of the Argentine Republic for five years has been:

YEARS.	Imports.	Exports.
1880	$44,067,000	$56,497,000
1881	54,030,000	56,069,000
1882	61,000.000	60,389,000
1883	80,435,000	60,207,000
1884	94,056,141	68,029.836
1885 (seven months)	42,098,126	41,298,025

The American trade with the Argentine Republic is shown in the following table:

YEARS.	Imports from the Argentine Republic into the United States.	Domestic exports from the United States to the Argentine Republic.
1885	$4,328,510	$4,827,026
1884	4,110,038	4,825,813
1883	6,192,111	3,357,670

Report of the American Commissioners.—The commissioners appointed to visit the Central and South American states, waited on President Roca while at Buenos Ayres and reported as follows:

> The share of the United States in the enormous commerce of the River Plate country, which includes Paraguay, Uruguay, and the Argentine Republic, is lamentably insignificant, and less than it was half a century ago. The reason is very apparent. Twenty-one lines of steamships connect these ports with those of Europe, while there is no regular steamship communication whatever with our country. From forty to sixty steamers arrive at Buenos Ayres every month from Europe, and not one from the United States. The flag of our country is never seen in these waters except upon men-of-war, and semi-occasionally upon some sailing-vessel which happened to be chartered for some special voyage. An English company sends a steamer to New York when necessary, where it discharges a cargo of hides and wool and reloads with a cargo of merchandise for Europe. The few products of our fields and factories found there are brought sometimes in these chartered vessels, but more frequently come by way of Europe, the mer-

chants with one voice saying that because of the absence of steam communication they can afford to buy in the United States only such articles as can not be obtained elsewhere.

Education.—Ex-President Sarmiento, founder of the public-school system in the Argentine Republic, is an advocate of the higher education of women in South America, having gained his advanced ideas while Minister to the United States. Through his instrumentality about forty American young ladies, graduates of Vassar, Wellesley, Mt. Holyoke, and other institutions, have been employed under ten-year contracts by the Argentine Government for the normal schools and female seminaries, and have given general satisfaction. These teachers receive salaries varying from $100 to $160 a month. Interference on the part of the Papal Nuncio was resented by the Minister of Education; the Papal Nuncio received his passport, with a polite but firm invitation to leave the country, and now the Holy See is not represented at the capital. The amount expended by the Government for education is $10.20 per pupil annually. In the United States it averages $8.70; in Germany, $6; and in England, $9.10.

The leading university of the country, at Buenos Ayres, has 48 professors and 720 students in law, medicine, science, and the classics. The University of Cordoba has 18 professors and about 200 students. There are also 14 national colleges—preparatory schools for the universities—with 70 masters and 1,480 pupils. A school for mining and one for agriculture employ 10 professors and have 76 pupils. The normal schools have 3,763 students.

There are altogether 30 colleges and normal schools for the higher education of men and women, with 430 teachers and 6,710 students, in a total population of fewer than 4,000,000.

Homestead Law.—In March the law was revised, which had already been passed under the Sarmiento administration, but had never been taken advantage of, granting 1,500 acres of land to all *bona fide* naturalized settlers, provided they build thereon a house or other buildings worth together $250, bring under cultivation 24 acres, and plant 200 trees within five years after settlement, when a title will be given in perpetuity to the settler.

Immigration.—Except the United States, no country attracts immigrants in such numbers as the Argentine Republic. In 1881 there arrived 47,489; in 1882, 59,843; in 1883, 73,210; and in 1884, 99,119. In 1883 and 1884, taken together, there arrived 117,802 Italians, 19,192 Spaniards, 5,024 Germans, 4,914 Swiss, 4,148 British subjects, 4,118 Austrians, 109 Argentines, 975 Belgians, and 524 Portuguese.

Colonization.—About thirty years ago the republic began a system of forming settlements or colonies of different nationalities, and ever since it has encouraged this mode of filling up its vacant territory. Sometimes these colonies have been founded by an individual having a large concession of land from the Government for that purpose. Italy, Switzerland, France, Germany, Russia, Denmark, England, Scotland, and Ireland, and even the United States, have furnished immigrants for these colonies; but the largest element in them all, and of the foreign population of the whole republic, is Italian. It is estimated that nearly one fifth of the entire population is of that race.

International Exhibition.—An International Exhibition of agricultural products and machinery is to open at Buenos Ayres on April 25, 1886. There are to be five groups, divided into 44 departments and 421 sections. The manager and president of the exhibition will be Mr. E. Sundlab, and the secretary Mr. J. Lacroze. The Congress has appropriated $80,000 for it. The province of Santa Fé alone imported from abroad last year $1,161,824 worth of agricultural machinery, and the provinces of Buenos Ayres, Entre Rios, and Tucuman import agricultural and sugar machinery on a proportionate scale.

Exploring Expeditions.—In June an expedition, composed of a complete staff of engineers and telegraph officers, set out for the Gran Chaco, on board of three steamers and several sailing-craft, ascending Paraguay river to the 21st degree of south latitude, there to found the city of Pacheco and build a road to the Bolivian city of Sucre. The commander of the expedition is the engineer-in-chief, Don Miguel Arana. The purpose is to establish a highway, and eventually build a railroad that will give Bolivia an outlet for trade to the Atlantic, since, by taking Cobija, Chili shut out Bolivia from the Pacific.

Another expedition by order of the Government was to be undertaken by the French explorer, M. Thouar, in November, 1885, in the region traversed by the head-waters of the Pilcomayo river, hitherto unexplored. In August M. Thouar made a preliminary trip to the rapids from Formosa, in Argentine territory.

Patagonia.—Since 1881 the claim of the Argentine Republic to that part of Patagonia east of the Andes has been conceded by all nations. Most of the regions explored by the expeditions sent out within the past two years were utterly unknown until the present time. They have never been approached from the Pacific, and the inhospitable Atlantic seaboard gave no inkling of the better land within; while the wide plains on the north, from which the hostile Indian tribes have just been driven, made Patagonia almost inaccessible from that direction. The Argentine expeditions have penetrated nearly half-way to Tierra del Fuego, and they intend to push on to the Strait of Magellan and to come into effective possession of a region from which the republic expects, through colonization, to derive great benefits. According to Dr. Hyades, who has lately returned from Tierra del Fuego, whither he was dispatched on a mission by the French Government, the Fuegans are the lowest human beings in the scale of existence. Their language contains no word for any number above three; they are unable to distinguish one color from another; they have no religion and no funeral rites; and they possess neither chiefs nor slaves. Their only weapons are bone-pointed spears; they grow neither fruit nor vegetables; and as their country is naturally barren, they are obliged to live entirely on animal food; but they are not cannibals; they ill-treat neither their women nor their old people, and they are monogamous.

Railroads.—There were in operation in the province of Buenos Ayres, in 1884, 799 kilometres of railway, the gross earnings of which were $3,128,995, and the net earnings $1,175,272. In 1883 the net earnings had been, for 557 kilometres in running order, only $892,107. There were forwarded in the same year 1,620,891 passengers, and 48,245,589 tons of merchandise. In 1885 there were thrown open to traffic 264 kilometres of new lines. Forty-two new locomotives were received from the United States and England; so that, together with one built on the spot, there were 90 running altogether. The rolling-stock consisted of 101 passenger and 2,502 freight cars. Of the latter, 50 were turned out by Argentine car-works. The Tolosa Railroad construction-shops were being built in 1885. The number of locomotives shipped from the United States to the Argentine Republic in the fiscal year 1883–'84 was 65, worth $906,103.

Telegraphs.—The length of lines in the province of Buenos Ayres in 1885 was 4,395 kilometres, 758 having been added during the year, and twenty new offices having been opened. The increase of new lines in 1884 throughout the republic was 3,200 kilometres, and the aggregate income from this source was $288,450, being $15,000 in excess of 1883.

Education.—Out of 503,591 children of school age, 146,325 attended school in 1884. Of the 35,741 pupils in school in Buenos Ayres, 24,351 attend the public schools. In the colonies and national territories of the republic there were, in 1885, twenty-six schools, and new ones are being built in Formosa, Viedma, Victorica, and Acha.

ARIZONA. Territorial Government.—The following were the Territorial officers at the beginning of the year: Governor, F. A. Tritle; Secretary, H. M. Van Arman; Attorney-General, Clark Churchill; Auditor, E. P. Clark; Treasurer, T. J. Butler. Supreme Court: Chief-Justice, Sumner Howard; Associate Justices, Daniel H. Pinney and W. G. Fitzgerald.

Legislative Session.—The Legislature met in January, and adjourned in March, having passed 123 acts and adopted 4 joint resolutions and 15 memorials to Congress. Among the acts are the following:

Providing that the rents and profits of the husband's separate property shall be his separate property, and the rents and profits of the wife's separate property shall be her separate property; an act to prohibit the use of obscene or abusive language; to prevent obstructions or impediments to travel or transportation upon the public roads of the Territory; to regulate unincorporated *acequias* on the south side of Salt river in Maricopa County; to punish the unlawful disposal and sale of mortgaged personal property; for the protection of live-stock growers; authorizing aliens to hold and transmit lands for mining purposes and purposes incidental to mining, and (not more than 320 acres at any one time) for manufacturing, commercial, agricultural, or grazing purposes; to prevent the introduction of diseased cattle into the Territory; to regulate the sale and transportation of dynamite and other explosives; to prevent the sale of intoxicating beverages on election-day; providing means for the Territorial exhibit at the New Orleans Exposition; providing for a Commissioner of Immigration, to be appointed by the Governor, with the consent of the Council, for two years, with an annual salary of $2,000; to provide for the drainage of mines, and to regulate the liabilities of miners and mine-owners in certain cases; to punish bribery and other corrupt influences at elections; to promote live-stock breeding; for the prevention of fraud, and the better protection of miners in the sale and purchase of ores and the working or reduction thereof; to establish and maintain a Territorial Insane Asylum at or near Phœnix, Maricopa County; for the protection of children from intoxicating liquors; to encourage the destruction of wild animals; an insolvent act; a mechanics' lien law; establishing a Territorial Normal School at Tempe, Maricopa County.

An act to establish a public-school system, and to provide for the maintenance and supervision of public schools in the Territory, creates a Board of Education, consisting of the Governor, Treasurer, and Superintendent of Public Instruction. It makes the probate judge of each county superintendent of public schools for the same, and creates a board of trustees for each district.

An act was also passed establishing the University of Arizona, at or near Tucson, to include, besides the ordinary collegiate department, normal, agricultural, and mining departments.

Another act provides that "no polygamist or bigamist, or any person practicing polygamy or bigamy, or what is known as "'celestial' or plural 'marriage,'" shall be entitled to vote or hold office in the Territory. The statute against bigamy was amended to meet more effectually the case of Mormons.

Finances. — The bonded indebtedness of the Territory amounted on the 1st of January to $350,000, of which $90,000 was incurred prior to 1883, and bears 10 per cent. interest, payable annually. Under the Funding Act of 1883 $260,000 in bonds were issued, bearing interest at the rate of 7 per cent. per annum.

"It will be seen by comparison with my last report," says the Auditor in his report for 1883 and 1884, "that the expenses very materially increased. An explanation of the reasons for this increase is very easily made and understood. In the first place, our Territory is increasing in population and business interests, requiring more attention and causing more criminal litigation and expense. And the care of our insane has swelled in expense. The expense of our Territorial prison for the past two years has nearly doubled, amounting to the sum of $87,658.68, as against two previous years, of $44,866.33, actually increasing in the amount of $42,792.35. Care of our insane costs us $30,562.45, as against that of two previous years, $20,567.89, actually increasing in the amount of $9,994.56. Aside from these items of expense, there was made an appropriation from the general fund, for the purpose of improving the Territorial prison, in the sum of $20,000, most of which has been expended. The total amount of warrants issued during the past two years is $208,784.04.

"The assessment-rolls, as returned to me, for 1883, place the valuation of the property of the Territory at $36,006,860.01. This was lessened by a compromise with the Atlantic and Pacific Railroad Company in the counties of Yavapai, Apache, and Mohave, where 391 miles of railroad were assessed $5,982,505.25. A settlement was had at the rate of $4,000 a mile, $1,564,000, decreasing the amount of the assessment-roll $4,418,505.25; this leaves $31,588,354.76 as the actual assessment. The returns for the year 1884 give $30,227,765.97. This would produce for an annual Territorial revenue $75,569.41. The revenue from all other sources, including licenses, fines, and penalties, will make up for what goes delinquent. This would then give us, for the two years, the sum of $151,138.82 with which to pay an expense of $208,784.04."

He recommends an additional tax of twenty cents on the $100. The Legislature granted an increase of ten cents.

Mormonism.—The Governor, in his message to the Legislature, says:

> Polygamous Mormonism has assumed such proportions, and occupies that defiant attitude in the Territory, that justifies and demands the most stringent legal remedies. I recommend such amendment to the existing so-called "bigamy law" as will facilitate the impaneling of impartial jurors in the several counties to serve on the trial of cases of bigamy and polygamy. I would adopt the features of the "Edmunds Bill," excluding from juries as incompetent any man who "believes it right to marry, have, live with, or cohabit with more than one woman as a wife at the same time." I would make general reputation, cohabitation, and all other circumstances, which would be admissible evidence in civil cases, competent to be considered by the jury in the trial of cases for bigamy and polygamy. I would so increase the penalty for these offenses as to make the punishment *both* fine and imprisonment. I would, by positive enactment, make unlawful cohabitation with more than one woman, without proof of any marriage ceremony, *prima facie* evidence of a polygamous relation, and declare the first or any other or subsequent wife a competent witness for the prosecution of the first or any other marriage ceremony or polygamous relation. In short, I would remove every obstruction that shortens the arm of the judiciary in reaching this defiant and infamous practice.

Toward the close of 1884, five Mormons were convicted and sentenced in the Territory for polygamy.

ARKANSAS. State Government.—The following were the State officers during the year: Governor, Simon P. Hughes, Democrat; Secretary of State, E. B. Moore; Treasurer, W. E. Woodruff, Jr.; Auditor, A. W. Files; Attorney-General, D. W. Jones; Commissioner of State Lands, Paul M. Cobbs; Superintendent of Public Instruction, Wood E. Thompson.

Legislative Session.—The Legislature met in January, and remained in session about three months. Among the acts passed were the following:

> To make appropriations for the support of the Arkansas Industrial University for the ensuing two years.
>
> To restore to market certain internal improvement, seminary, and saline lands heretofore sold on a credit.
>
> Making appropriations for the support of the executive, legislative, and judicial departments.
>
> Fixing the rate of taxation for the next two years at 2 mills for general purposes, 2 mills for public schools, and $1 per capita tax.
>
> To fix the time for holding elections in cities of the first class.
>
> To make persons charged with crimes and offenses competent witnesses in the courts in the State.
>
> To protect the citizens of the State from stock-drovers and speculators.
>
> To improve the State Capitol building, and to erect an armory.
>
> Providing for the sale of the 16th section school-lands.
>
> To forfeit railroad charters in the State.
>
> To build an additional wing to the State Lunatic Asylum.
>
> To grant certain privileges to, and prescribing certain duties of, telegraph and telephone companies.
>
> To legalize marriages.
>
> To provide for the support of the Arkansas Deaf-Mute Institute.
>
> To provide for the erection of new buildings within the walls of the State Penitentiary.
>
> To erect an additional building for the Arkansas School for the Blind.
>
> To erect an additional building for the Arkansas Deaf-Mute Institute.
>
> For the better granting of titles.
>
> For the support and maintenance of the State Lunatic Asylum.
>
> To fix the salaries of county and probate judges.
>
> To punish crime more effectually.
>
> To provide for the support of the Arkansas School for the Blind.
>
> To prevent deception in the sale and use of bitters.
>
> To ascertain and register the outstanding bonded indebtedness of the State.

James K. Jones (Democrat) was elected United States Senator for the full term, and ex-Governor James H. Berry (Democrat) to fill the vacancy caused by the resignation of Senator Garland, appointed Attorney-General of the United States. Mr. Berry was the immediate predecessor of Governor Hughes.

Finances.—On this subject, the Governor, in his message to the Legislature at the beginning of the year, says:

> The reports of the Auditor and Treasurer cover the two years from Oct. 1, 1882, to Sept. 30, 1884. From them it will be seen that, at the meeting of the last General Assembly, the State was indebted in the sum of $100,000, money borrowed the previous September; that in March, 1883, $150,000 additional was borrowed by the Finance Board. Both of these sums, together with the interest thereon, have been paid. In addition to the payments of the amounts above named, the Treasurer has, within the last two years, redeemed 258 (amounting to $258,000) of the 6 per cent. bonds of the State, commonly called the Loughborough bonds. There is now in the treasury to the credit of the sinking fund, about $275,000 in United States currency. No money has been borrowed since March, 1883, and no State scrip issued. The State scrip is practically gone, the Loughborough bonds, except 170 belonging to the permanent school fund and 16 belonging to Washington County, have been paid off. It is estimated by the Auditor that the collection of the revenue for 1884 will place in the State treasury, by the 20th of May, 1885, to the credit of the sinking fund and of the general revenue fund,

$600,000 in addition to the sum now held by the Treasurer. This healthy condition of our finances brings us, to use the language of the Treasurer, "face to face with the question of the settlement of our undisputed debt." This debt, principal and interest, is $4,869,943, more than one half of which is interest. No interest has been paid thereon since 1872.

The people, at the recent election, have, by an overwhelming majority, declared that they do not intend to pay what is known as the disputed debt of the State, including the railroad aid, the levee, and the Holford bonds. Their action in that behalf meets my hearty approval, but I can no longer see any valid reason or excuse for not making settlement and provision for the payment of the interest, and gradual reduction of the principal, of our undisputed debt. The Auditor and Treasurer both fully demonstrate by their reports that it is possible to reduce the rate of taxation, meet all legitimate expenses of the State government, and make provision for the settlement of this old undisputed debt, which has so long tended to paralyze the energies of the people, repel immigration, and retard the development of the State's resources.

Chancellor Carroll's decision, rendered at the beginning of the year, in the case of the State *vs.* ex-State Treasurer Churchill and sureties, submitted to him on its merits after argument by counsel on all controverted points, declares the aggregate indebtedness to the State of the ex-Treasurer to be $80,522.01, not counting interest. The Chancellor had previously decided that the erasure of names on the first and third bonds, covering the entire defalcation except $3,008.87, rendered those bonds worthless, and relieved all the sureties who had made the plea of *non est factum*. Any of the sureties who had not applied for this mode of relief, together with the ex-Treasurer, are liable. No sureties on the second bond are relieved. Both prosecution and defense appealed.

Education.—"The report of the Superintendent of Public Instruction," says the Governor, "shows a steady and most gratifying increase in the number of school-houses, and in the attendance of pupils throughout the State upon our common schools. The amount of money distributed by the Superintendent to the various districts last year far exceeds the sum distributed in any previous year. I can not agree with the Superintendent, that the money arising from liquor-licenses, insurance agencies, and the proceeds of forfeited lands, should be diverted from the general revenue fund and appropriated for school purposes. Such a disposition of this money would render it impossible to provide for the ordinary expenses of the State, the interest on the public debt, and at the same time grant the people a reduction in their taxes."

Penitentiary.—The number of convicts in the penitentiary has increased within the past two years. In addition to paying the cost of transporting the convicts from the various counties to the State Prison, the lessees paid into the State treasury $24,600 for the year beginning May 7, 1883, and ending May 7, 1884. The death-rate among the convicts has been comparatively light during the past two years. Under the present contract allowing the convicts to be worked outside the walls of the penitentiary, they have been distributed at various points in the State, principally in the counties of Pope, Conway, Johnson, Jefferson, and Phillips.

Consolidation of Elections.—"I repeat," says the Governor, "the recommendation made by me two years ago, that the time of holding the general election for the State be changed from the first Monday in September to the Tuesday after the first Monday in November. Under the present mode the citizens are subjected to the inconvenience of being compelled to abandon their ordinary labors and business, and vote twice within a period of two months. The expense to the counties is simply doubled, and the impossibility of inducing all of the electors to vote a second time in November has caused the State and our people to be greatly misunderstood and misrepresented abroad."

ART. See FINE ARTS.

ASSOCIATIONS FOR THE ADVANCEMENT OF SCIENCE. American.—The thirty-fourth annual meeting of the American Association for the Advancement of Science was held in Ann Arbor, Mich., Aug. 26 to Sept. 1, 1885. The meeting was small, but the character of the papers presented was high. The attendance of members reached 364, and the number of papers was 174. The following is the list of vice-presidents and secretaries of sections at this meeting, respectively followed by the number of papers presented in each section:

A. Mathematics and Astronomy—J. M. Van Vleck, Middletown, Conn.; E. W. Hyde, Cincinnati, O: 12.

B. Physics—C. F. Brackett, Princeton, N. J.; A. A. Michaelson, Cleveland, O.: 23.

C. Chemistry—W. R. Nichols, Boston, Mass.; F. P. Dunnington, Charlottesville, Va.: 17.

D. Mechanical Science—S. Burkitt Webb, Cambridge, Mass.; C. J. Woodbury, Boston, Mass.: 12.

E. Geology and Geography—Edward Orton, Columbus, O.; H. Carvill Lewis, Philadelphia, Pa.: 27.

F. Biology—B. G. Wilder, Ithaca, N. Y.; M. C. Fernald, Me.: 32.

G. Histology and Microscopy—S. H. Gage, Ithaca, N. Y.; W. H. Walmsley, Philadelphia, Pa.: 4.

H. Anthropology—W. H. Dall, Washington, D. C.; Mrs. Erminnie A. Smith, Jersey City, N. J.: 26.

I. Economic Science and Statistics—Edward Atkinson, Boston, Mass.; J. W. Chickering: 21.

The following were the general officers:

President, H. A. Newton, New Haven, Conn.

Permanent Secretary, F. W. Putnam, Cambridge, Mass.

General Secretary, C. S. Minot, Boston, Mass.

Assistant General Secretary, C. C. Abbott, Trenton, N. J.

In the organization of the society two changes of importance were effected. One was the abolishment of Section G. This was done on the theory that microscopy is now an auxiliary in so many branches of science that it should not be treated as a separate division. The second change was in the addition of the words "and Engineering" to the title of Section D, thus inviting all classes of engineers to contribute the results of their work to the records of the Association. In action affecting public questions, the most important was the passage of a series of resolutions at the session of Aug. 28, concerning the Coast Survey. They were passed apropos of the report of the United States Treasury Department Commission on the Coast Survey, and condemned certain criticisms directed against the survey which were said to have been made by it. The resolutions expressed high approval of the work of the organization in question. The printed volume (pp. 736) containing the report of the 1884 meeting was issued just prior to the 1885 meeting. The proceedings were opened by the president's address, delivered by Prof. J. P. Lesley, of Philadelphia, Pa. In Section A, Prof. Newton, of Yale College, read a paper on the effect of small bodies passing near a planet upon the planet's velocity. It was quite technical, and was followed by papers by Prof. William Harkness, of the United States Naval Observatory; Prof. G. W. Hough, of Dearborn Observatory; and Mr. C. H. Rockwell, of Tarrytown, N. Y., all upon the subjects of instruments for astronomical observations. The last-named gentleman gave the results of observations with a newly invented instrument, the almucantar of Mr. Chandler, which gives a radically new and very accurate method of determining star positions.

In Section B, Prof. Langley, of Ann Arbor, read a most interesting paper on the measurement of the wave-lengths of radiant heat as radiated by the earth. His observations tended to prove the existence of wave-lengths as great as five ten-thousanths of an inch, twenty times the length of the longest wave of the visible solar radiations. Mr. J. A. Brashear supplemented this by a paper describing his method of polishing the rock-salt prisms used in the investigation. Other papers by Com. Jewell on phenomena of gun-cotton explosions, by Prof. Dolbear on telephonic and electric subjects, and by Prof. E. L. Nichols on spectroscopy, disagreeing in some conclusions with the statement of Prof. Langley, may be mentioned.

In Section C, Prof. W. R. Nichols read a paper on sanitary chemistry, treating of food adulteration, ventilation, and the need of courses in sanitary engineering in our colleges. Prof. A. B. Prescott treated the limits of detection of poisons when mixed with meat, bread, and organic substances. Messrs. Cowles and Mayberry presented a most interesting paper on an electric furnace and aluminum alloys made in it. The voltaic arc is the source of heat, and has power enough to reduce aluminum from its oxide and silicate. It produces aluminum alloys much cheaper than does the old method (St. Clair Deville's). Alloys of boron and copper can also be obtained. Great tensile strength is the most important property of these compounds. Miss Helen C. D. Abbott read an exhaustive paper on the chemical composition of *Yucca angustifolia*. Discussions on the questions "What is the best initiatory work for students entering upon laboratory practice?" and "To what extent is the knowledge of molecular physics necessary for one who would teach theoretical chemistry?" were participated in by various members.

In Section D, Prof. S. Burkitt Webb, of Cambridge, read a very abstruse paper on thermodynamics. Prof. Thurston, of Cornell University, read a very valuable paper on cylinder condensation in steam-engines. Other papers in this section related to practical questions on the instruments and processes of engineering. This section also indulged in a discussion on the best methods of teaching its subject.

In Section E, Prof. Orton, State Geologist of Ohio, read a paper on recent geological progress and one on coal. Papers were contributed by Profs. Winchell, James D. Dana, Edward Orton, and others. Prof. Henry S. Williams's paper on the relations between stratigraphy and changes in fauna excited much attention.

In Section F, Prof. Wilder, of Cornell University, spoke on educational museums of vertebrates. He described the collections at Cornell, arranged to show the comparative relations of vertebrate animals. Several papers, dealing with botanical questions, were given by Prof. Sturtevant, of the New York Agricultural Experiment Station, Prof. Bessey, of the University of Nebraska, and others.

In the now abolished Section G, papers were presented by Profs. Gage, of Cornell University, W. H. Walmsley, T. J. Burrill, and C. P. Hart.

In section H, Capt. W. H. Dall, of Washington, read a most interesting paper on the Indians of Alaska; the Rev. Mr. Darcy spoke of the Oregon Indians at the Siletz agency, and the Rev. Mr. W. M. Beauchamp treated of the Iroquois clans and sachemships. Mr. A. W. Butler spoke of the ruins at San Juan Teotihuacan, Mexico. This was followed by a paper on the significance of flora to the Iroquois, by Mrs. Erminnie A. Smith. The paper was a study of the names given to various trees and plants in the different nations of the Iroquois, and a comparison of these names, tracing them up to the parent stock. Another lady, Miss Alice C. Fletcher, read a paper that excited much interest, on the sacred war-tent and some war-customs of the Omahas. She subsequently read a paper entitled "An Average Day among the Sioux." Dr. C. S. Minot, in a paper on the number-habit, referred to experiments conducted by the American Society for Psychical Research. These did not tend to prove the possibility of mind-reading, the special object of the investigation.

In Section I, Mr. Edward Atkinson spoke of the application of science to the production and consumption of food, alluding in it to Prof. Atwater's admirable tables of food-values. (See "Annual Cyclopædia" for 1883, p. 346.) Mrs. Ellen B. Richards, of Boston, treated the subject of elementary science-teaching in grammar-schools. Gov. John B. Hoyt, of Wyoming, spoke of the need of a systematic reorganization of the executive departments of the Government. The silver-coinage question was opened by a paper by Prof. E. B. Eliott, of Washington, followed by a discussion, in which Prof. Harkness, following the lead of the essayist, condemned the present silver-coining propensities of the Government. An interesting paper, by Prof. Eliott, on the economy of electric lighting at the Philadelphia Post-Office, followed. Various committee reports were made, notably one from the Committee on Stellar Magnitudes (Prof. C. E. Pickering, chairman), with elaborate tables. Through Dr. C. S. Minot, the committee on the subject of international conventions reported progress in the direction of a joint meeting of the British and American Associations. This will be found referred to in the account of the Aberdeen meeting of the British Association, given below. It was announced that Mrs. Elizabeth Thompson, of Stamford, Conn., had presented $25,000 as an endowment, the income to be expended in the interest of pure science by the International Convention when organized. In the mean while permission has been secured for the disposal of the income as the trustees shall see fit. The board of trustees includes: Dr. H. B. Bowditch, of Boston, Chairman; Mr. William Minot, Treasurer; President F. A. Walker, of the Massachusetts Institute of Technology; Prof. E. C. Pickering, of the Harvard Observatory; and Dr. C. S. Minot, Secretary.

The next meeting of the society is to be held in Buffalo, N.Y., beginning Aug. 18, 1886. For the ensuing year and for that meeting the following officers were elected:

President, Prof. Edward S. Morse, of Salem, Mass.; Section A, Mathematics and Astronomy, vice-president, Prof. J. Wolcott Gibbs, of Yale College, New Haven, Conn.; secretary, Mr. S. C. Chandler, Jr., of the Harvard Observatory, Cambridge, Mass.; B, Physics, vice-president, Prof. C. F. Brackett, of the College of New Jersey, Princeton, N. J.; secretary, Prof. H. S. Carhart, of the Northwestern University, Evanston, Ill.; C, Chemistry, vice-president, Dr. H. W. Wiley, of the Department of Agriculture, Washington, D. C.; secretary, Prof. William McMurtrie, of the Illinois Industrial University, Champaign, Ill.; D, Mechanical Science and Engineering, vice-president, Mr. O. Chanute, of Kansas City, Mo.; secretary, Mr. William Kent, of Jersey City, N. J.; E, Geology and Geography, vice-president, Prof. T. C. Chamberlin, of the United States Geological Survey, Boloit, Wis.; secretary, Prof. E. W. Claypole, of Buchtel College, Akron, O.; F, Biology, vice-president, Dr. Henry P. Bowditch, of the Harvard Medical School, Boston, Mass.; secretary, Mr. J. C. Arthur, of the New York Experiment Station, Geneva, N. Y.; H, Anthropology, vice-president, Mr. Horatio Hale, of Clinton, Ont.; secretary, Mr. A. W. Butler, of Brookville, Ind.; I, Economic Science and Statistics, vice-president, Mr. Joseph Cummings, of Evanston, Ill.; secretary, Mr. H. E. Alvord, of Houghton Farm, Mountainville, N. Y. No nominations were made for Section G, Histology and Microscopy, as it has been decided, as stated, to merge it in Section F. The permanent secretary is Mr. F. W. Putnam, of the Peabody Museum, Cambridge, Mass.; the general secretary, Prof. S. G. Williams, of Cornell University, Ithaca, N. Y.; the assistant secretary, Prof. W. H. Pettee, of the University of Michigan, Ann Arbor; and the treasurer, Mr. William Lilly, of Mauch Chunk, Pa.

Sixty-eight members were elected fellows, among them the following: Dr. Cornelius R. Agnew, New York; S. Moulton Babcock, New York Agricultural Experiment Station, Geneva; Alexander Melville Bell, Washington; Prof. William Morris Davis, Jr., Cambridge; Alexander E. Douglass, New York; William L. Elkin, Yale College; Thomas S. Gladding, New York; Albert P. Hallock, Ph. D., New York; Prof. Lewis M. Haupt, University of Pennsylvania; Charles M. Stillwell, New York; G. B. Grinnell, New York.

One hundred and fifty-four new members were elected.

British.—The fifty-fifth annual meeting of the British Association for the Advancement of Science was held in Aberdeen, Scotland, beginning Sept. 19, 1885. The number of papers made it necessary to begin their reading on Saturday, an almost unprecedented fact in the history of the society. The attendance was 2,203 persons. For committee work under all the different sections the sum of £1,195 was voted. Seventeen important reports from committees were received. This division includes some of the most important work of the society. The meeting was considered the best ever held. For the 1886 meeting, Birmingham was chosen; for 1887, Manchester; and for 1888 or 1889, London is hoped for, and the co-operation of the American Association is also desired. During the session many evening lectures, by Profs. Adam, Dixon, Murray, and others, were given. Excursions to Balmoral, to Dunecht, and to Lord Crawford's observatory and elsewhere, were indulged in. The inaugural address was delivered by Sir Lyon Playfair, F. R. S. He alluded to the last Aberdeen meeting, held in 1859 under the presidency of Prince Albert. In speaking of the promotion of science as a duty of state-craft, he contrasted America with England, praising the former for its governmental use of scientific workers in its departments. The biological laboratories at Wood's Holl, Massachusetts, and at Washington, D. C., were praised, and Washington's Farewell Address was quoted in support of the speaker's views. Like other speakers at the same meeting he spoke of scientific education, holding that too much attention was given to the classics and not enough to science.

Section A, devoted to mathematical and physical science, was presided over by Prof. G. Chrystal, F. R. S. E. In his address he spoke of the diffusion of scientific knowledge. He criticised very severely the civil-service examinations, as based entirely on standards. An interesting discussion on the kinetic theory of gases was participated in by various members of this section. Several papers were read on Sir Vernon Harcourt's Pentane standard of illuminating power. This standard was also provisionally recommended by the Committee on Electrical Measurements. Prof. Osborne Reynolds's paper on the dilatancy of rigid particles in contact was of the greatest interest.

Section B, devoted to chemical science, was presided over by Prof. Henry E. Armstrong, Ph. D., F. C. S. He spoke on the advancement of chemical science, taking the ground that the present system of science-teaching was faulty; that more research should be executed by the students. In the succeeding division of his address he gave a very abstruse discussion of chemical affinity and electro-chemical relations of atoms, taking the ground that as a rule a binary compound can not conduct electricity.

Section C, devoted to geology, was presided over by Prof. J. W. Judd, F. R. S. His address contained a general review of the remains of geological periods. Interesting reference was made to the solitary sample of the carboniferous rocks ever discovered in Scotland, that has recently been noted.

Section D, devoted to biology, was presided over by Prof. W. C. McIntosh, M. D., LL. D. He gave a most interesting address on phosphorescence of marine animals, referring it to the following orders: Protozoa, cœlenterates, echinoderms, worms, rotifers, crustaceans, molluscoids, mollusks, and fishes. The function of phosphorescence in the animal world he considered was still unexplained. Prof. Marsh, of Yale College, read a paper in this section on the size of brain in extinct animals. Sir John Lubbock read papers on ants and bees and on the intelligence of the dog, complaining that we devoted our energies to teaching instead of to understanding these animals.

Section E, devoted to geography, was presided over by Prof. J. T. Walker, F. R. S. His address included a long review of the British surveys of India. Their immense extent, including over 10,000 miles of actual spirit-leveling, was described. Several papers by officers of these surveys were given in this section.

In Section F, devoted to economic science and statistics, papers were read on the subjects of taxation and free trade.

Section G, devoted to mechanical science, was presided over by B. Baker, Inst. C. E. His address, with its frequent references to American practice, was highly interesting. He devoted a part of it to the effects of intermittent strains as a subject apt to be neglected in bridge-construction. These strains in time would rupture almost any bar. The replacement of parts in the trusses of the New York elevated railroads, he said, was rendered necessary by this species of deterioration. He then described, more particularly, the construction of the Forth Bridge, where almost everything is done by hydraulic power. Of American bridge-practice he said that the system of adhering in each factory to a single type of bridge, and correcting its defects, was the best.

Section H, devoted to anthropology, was presided over by Prof. Francis Galton, F. C. S. His address was on the subject of types and their inheritance. It was a most curious investigation, reducing the conditions of type variations as applied to hereditary stature to the form of an equation.

Among the committee reports, those on chemical nomenclature and on electric standards may be cited as especially important. At a council meeting it was resolved to give a hearty welcome to the American Association, which may hold its meeting in 1887 or 1888 in London.

For the ensuing year, Prof. William Dawson, President of McGill University, Montreal, was elected president.

Reports of the papers are now appearing in "Nature," of London.

ASTRONOMICAL PHENOMENA AND PROGRESS.

Sun-Spots.—For many years astronomers have regarded the periodicity of sun-spot maxima and minima as a proved fact, and the accumulation of evidence derived from observation extending over many years by Schwabe, Wolf, and others seemed to warrant the conclusion that a maximum of solar spots recurred regularly about once in eleven years. So strongly had this theory become intrenched that astronomers looked confidently for the close of another maximum in the year 1882. But they were disappointed, for during 1883-'85 there appears to have been no abatement in their number or magnitude. Suspicion, therefore, necessarily attaches to the truth of the theory of periodicity, and we are obliged to suspend judgment until further observations have been made.

As to the time of the termination of the last sun-spot maximum, observers differ. Mr. H. C. Maine, of Rochester, N. Y., who has made a study of the sun-spots for many years, places it at about the middle of 1855, while another observer carries its period back to the beginning of the year. That it did not occur until about the close of 1884 is generally conceded. Frequently, during the early months of 1885, spots upon the sun were, without difficulty, seen by the naked eye if shielded with a smoked glass. Such a one was seen on May 25, and, on another occasion, two were visible at the same time.

Another conclusion that appears to have been too hastily arrived at, is the connection that was supposed to exist between the auroræ and sun-spots. While this has sometimes seemed to be verified, yet it is quite true that many astronomers have been precipitate in declaring that there existed an intimate relation between the two, with periodicity strongly marked—that is to say, that sun-spot maxima and minima, and the maxima and minima of the auroræ, occurred simultaneously. The fact that, during the just-past prolonged maximum, there was a minimum of the auroræ, militates against this hypothesis, or, it may be, against any connection whatever between the two phenomena.

Photographing the Solar Corona in the Absence of an Eclipse.—Had Dr. Huggins made public declaration of having photographed a grain of sand on the surface of the moon, or any other ludicrous statement, the announcement would not have been received with greater incredulity than that of his having succeeded in photographing the solar corona in presence of an uneclipsed sun. But the evidence that he has really accomplished this feat is deemed conclusive. In a recent lecture before the Royal Institution, he gave an account of his experiments, and in the course of his recital said: "Much of the light from the corona comes from near the ultra-violet end of the spectrum, and therefore it might be expected to be seen through colored media exercising the requisite selective absorption; but then comes in the drawback that the particular rays in which the corona is especially rich are near the limit of the power of the eye, and have but a feeble influence upon vision. I therefore looked to photography for aid, especially as it is possible to accentuate photographic effects, so that the photograph is no longer true to nature." After detailing several processes tried which resulted in failure, he proceeds: "It has long been demonstrated that chloride of silver is particularly sensitive to the rays in which the corona is relatively rich, so that salt I concluded to be the best for my photographic operations. Then came in the difficulty about the imperfect achromatism of the lenses of refracting telescopes when used for photographic purposes; consequently I employed, in the first instance, a Newtonian reflecting telescope with a large and a small mirror. With these appliances twenty pictures were taken, on all of which coronal appearances were visible." In his later experiments he discarded the use of the small mirror, the sun reaching the larger one through a long blackened and diaphragmed tube, thus getting rid of reflections from two mirrors. The backs of the photographic plates were also blackened to prevent reflection from the back surfaces of the light that passed through the photographic films. After all these precautions had been taken, the coronal impressions were still seen. Regarding the nature and cause of the corona, he says: "There are five hypotheses to account for it: 1. That it is a large gaseous atmosphere around the sun. 2. That it is matter ejected from the sun. 3. That it is something of the nature of Saturn's rings, and consists of meteoric matter. 4. That we see the impouring of the tails of comets. 5. That there are meteoric streams illuminated by the sun, which are not revolving near the sun, or falling into it, but are parts of the elliptical orbits of comets." He is of the opinion that there may be some truth in all these hypotheses. That the corona is a very complex phenomenon is abundantly proved by telescopic, spectroscopic, and polariscopic observations of it during total eclipses. Dr. Huggins's own idea is that the corona is not caused by a solar atmosphere, but by particles of matter, and that a single atom in each cubic mile would be sufficient to produce the corona as seen. Photographic experiments are still in progress at the Cape of Good Hope by Mr. C. Ray Woods, under the auspices of Dr. Huggins.

Red Sunsets.—This mysterious phenomenon, which the scientific world is baffled to explain, still continues. It follows the setting and precedes the rising sun, and is often called respectively the after-glow and the fore-glow. From the fact that it appeared immediately after the great volcanic eruption of Krakatoa, the belief obtained that the dust, gases, etc., ejected with a force sufficient to throw them to a height far above the influence of wind, clouds, and rain, would account for all the phenomena of this character—the after-glow, the fore-glow, and the noon-glow—since observed. By its long continuance, however, it awakens doubt as to the truth of this hypothesis, which by many is already abandoned. On all occasions when the after-glow is very bright and twilight short, three distinct glows have been visible, following each other in regular succession. The third or last glow is, even on the most favorable occasions, very faint, and might easily be overlooked. Another feature, seen only in the east and exactly opposite the sun, is a broad, crimson-colored arch, each end resting on an abutment of the same color, some ten degrees in length in azimuth, the two approaching quite near to each other, though never meeting, there being fonr or five degrees of untinted sky between. It is quite transitory in duration, never lasting over ten minutes. It can not be seen at all during the months of June, July, and August, in consequence of prolonged twilight.

During the spring months of 1885 there was a partial subsidence, and, on some occasions, an entire absence of the glow, and astronomers were of the opinion that it was perhaps abating, and would probably soon entirely cease; but about the middle of July it suddenly reappeared with a brilliance almost equaling that of the latter part of 1883. There appeared to be occasional abatements, followed by outbursts which were apparently governed by no law, neither did they follow in regular sequence. The after-glow on the evening of September 14 was not surpassed by any previous display.

Simultaneously with the appearance of the sunset glows there was visible, surrounding the sun at midday, a halo of light of a color exceedingly difficult to liken to any terrestrial tint, which, though fluctuating in brightness and extent, continued visible for nearly two years, and much interfered with delicate astronomical observations. This simultaneity of the appearance of the three glows argued strongly in favor of their identity of origin, which was very widely believed. The ease with which hasty and erroneous conclusions are arrived at in observing the ever-changing phenomena of nature is strikingly illustrated in this instance, for the fact that since the recent outburst of the sunset and sunrise glows the noon-glow has entirely vanished, shows decisively that the connection between them is not an absolute one at least, and probably does not exist.

Celestial Photography.—The advance made in this department of science has been so great as to mark an era in astronomical progress. It is now many years since the first successful efforts to obtain by the photographic process exact delineations of the mountains, craters, landscapes, etc., on the moon, and spots and faculæ on the sun, were made; but attempts to photograph the stars, especially those which are telescopic, invariably resulted in failure. Now, however, persistent and long-continued effort united with skill has overcome all obstacles, and success surpassing the most sanguine anticipation has at last been achieved. Stars as faint as the fifteenth magnitude are now depicted on the sensitive plate, giving an absolutely perfect record and a chart of the heavens which in point of accuracy is unapproachable by human hands.

The following is a translation of the report of the Henry brothers, who are connected with the Observatory of Paris, descriptive of the instrument by means of which these wonderful pictures are obtained: "The instrument consists of two object-glasses placed side by side in a hexagonal tube, their optical axes being parallel and separated by a thin partition through its entire length. One of the object-glasses (9½ inches aperture and 11 feet focal length) is corrected for visual rays, and serves as a finder. The other (aperture 13·4 inches and focal length 11 feet 3 inches) is corrected for actinic rays and is used for photography, and covers a field three degrees in diameter." The instrument is mounted equatorially and driven by clock-work, running for three hours without being re-wound, and has very fine independent back movements. The photographic objective is the largest yet made, and was constructed by the brothers Henry.

On the 23d of April last an exposure of one hour gave a fine negative, which on a surface ten inches square, representing five square degrees of the heavens, showed distinctly 2,790 stars from the fifth to the fourteenth magnitudes. Those at the edges of the plate were as sharply defined as those in its center. The stars of the fourteenth magnitude had a diameter of about $\frac{1}{1000}$ of an inch. Traces of stars of the fifteenth magnitude can be seen on the negative, but are too feeble to be reproduced on the sensitized paper. By longer exposure not only they but sixteenth-magnitude stars can certainly be obtained. The construction of such a chart made in one hour would, by ordinary methods, require several months of assiduous labor.

The following are the necessary minimum exposures; though, to obtain negatives for good paper prints, triple the time is required:

1st magnitude stars require................	0·005 second.
2d magnitude stars require................	0·013 second.
3d magnitude stars require................	0·03 second.
4th magnitude stars require................	0·08 second.
5th magnitude stars require................	0·2 second.
6th * magnitude stars require................	0·5 second.
7th magnitude stars require................	1·3 second.
8th magnitude stars require................	3·0 seconds.
9th magnitude stars require................	8·0 seconds.
10th magnitude stars require................	20·0 seconds.
11th magnitude stars require................	50·0 seconds.
12th magnitude stars require................	2 minutes.
13th magnitude stars require................	5 minutes.
14th magnitude stars require................	13 minutes.
15th magnitude stars require................	33 minutes.
16th magnitude stars require........	1 hour and 23 minutes.

The table shows that the difference of exposure varies between stars of the first and the sixteenth magnitudes as 1 to 1,000,000. Between two consecutive magnitudes the relation is 2·512. The plates used were the gelatine-bromide. The well-known cluster in Perseus was photographed by these gentlemen in fifty minutes. The negative plate shows stars down to the thirteenth magnitude—509 in all. The telescope employed was a 6·3-inch refractor. After enlarging the photograph four times, it was reproduced by the photo-engraving process, and embodied in the "Annual Report of the Paris Observatory." These copies are on the scale of five inches to a degree.

Mr. Common, of England, who is authority on this subject, says: "Any star that can be seen at all with a telescope can be photographed with the same, and, furthermore, stars that can not be seen at all will, by long exposure, reveal themselves on a negative plate. These facts are on the border-line of the marvelous, and must work a revolution in observational astronomy. Some one has well said, 'A library may now be made, not of books full of figures and descriptions—the accumulated work of many men working many years, each on his own system—but of pictures written on leaves of glass by the stars themselves.'"

As there are about 41,000 superficial square degrees in the firmament, and as each negative represents five such degrees, it follows that about 5,000 pictures would include the entire sky, with not one of the 20,000,000 stars, not even those of the fifteenth magnitude, missing.

Eclipses.—The regions within which the annular phase of the eclipse of March 16 was visible were mostly upon the ocean and in an uninhabited part of the earth. And, though the eclipse was annular along a line passing through the northern part of California and the Northwestern Territories, yet no extensive arrangements for its observation were made. The scientific interest attaching to an annular eclipse is, however, of little importance compared with that of a total one, for, except for noting the times of the several contacts for the determination of the moon's diameter and of the inequalities of her motions, annular eclipses possess little scientific value. Not so with a total eclipse. For, while his disk is covered by the moon, which sometimes lasts for several minutes, time is had for valuable observations —telescopic, spectroscopic, and polariscopic— of the sun's surroundings, especially of the red prominences on the sun's limb, and of the corona which completely and, in certain directions, extensively surrounds him.

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* Faintest visible to naked eye.

The path of totality of the eclipse of the sun on Sept. 8, as is not infrequently the case, was confined almost wholly to the ocean, the only exception being the southern end of the northern and the northern end of the southern of the two islands of New Zealand, where totality lasted nearly two minutes. The last central eclipse visible in these islands occurred on Dec. 29, 1796, and was annular. The next central eclipse in New Zealand will occur on Jan. 3, 1927, and will be annular. During the totality of the solar eclipse of Sept. 8 of this year, the planet Jupiter was within the sun's corona, being but 46′ from the sun's limb. In the total solar eclipse of 1870, Saturn had a similar place, being within the corona, yet, strangely enough, appears not to have been seen by any observer. It seems quite logical, therefore, to infer that, if Saturn could thus escape detection, the non-discovery of an intra-mercurial planet during the total eclipse at Caroline Island need excite no surprise.

Jupiter.—The "great red spot" that appeared so unexpectedly and, it is probable, somewhat suddenly in 1878 upon this planet has been made the subject of telescopic study by every astronomer of the world. Many hypotheses—possibly all valueless—have been advanced to account for its formation, its color, its drifting both in longitude and latitude, its immense size, and long-continued duration. It is still visible, though so much fainter than during the first two years of its existence as to lead several astronomers erroneously to announce its disappearance. At the present writing it is slowly increasing in brilliance, and its entire outline can now be traced, though it is exceedingly faint, and its color very pale. The extraordinary fact is mentioned by several observers—notably Mr. Denning, of England, and Prof. Young, of Princeton, N. J.—of the appearance of a white cloud upon the red spot and concentric with it, which, being a little smaller, leaves an elliptical annulus of a pinkish hue, about 2″ in width, surrounding it. This interior obliteration, now perfect, has been a very gradual process, first remarked about a year ago, but, until March, April, and May last, not sufficiently intensified to attract general notice. At the latest observations of Jupiter, previous to his too near approach to the sun to render further examinations possible, it was thought that the central portion of the spot was slowly filling with matter of a brick-color, but so pale as almost to elude detection. This spot will be watched with increasing interest by astronomers, to ascertain, if possible, if its changes are marked by periodicity. The average size of this spot, which Prof. Hough calls a floating island, is 29,600 miles in length by 8,300 in breadth. Its disjunction with the planet is proved by its drifting in longitude, which during the first year amounted to 10,000 miles, and in the second year to 30,000 miles.

For several years, especially during the past two or three years, there have appeared with considerable frequency small, round, white spots, with outlines of limb as sharply defined as those of a satellite in transit. The cause of these apparitions lies enshrouded in even deeper mystery than that of those peculiar and interesting markings called his belts, which are never wholly absent, or of the great red spot. In an article on Jupiter's spots by Prof. Young, in the "Sidereal Messenger" for May, 1885, he says: "On March 25 nine brilliant white spots, each as large and several of them as round and as well defined as the disks of satellites, were seen. These bright spots were seen again on April 1, having preserved their configuration sensibly unchanged during the week."

The dark transits of Jupiter's satellites continue to engage the attention of astronomers, but as yet no solution has been reached. No theory of causation, meeting with general acceptance, has been advanced. Many dark transits of his satellites, especially of satellites III and IV, have been observed during the year.

The physical conditions of Jupiter appear, in at least one respect, to be somewhat analogous to those existing on the sun, for, as the sun's rotation period as determined by spots near the equator, gives a different value from that obtained from those nearer the solar poles, so also the rotation period of Jupiter, as ascertained by the rotation of spots near and more distant from his equator, differs, and renders the true determination of this value—though to only a limited extent—a matter of uncertainty. The difference in either case is accounted for by the fact that the spots have a proper motion—that is to say, that they appear disjoined to the bodies themselves and free to move, and seem to drift both in latitude and longitude, particularly in the latter co-ordinate.

To the assiduous labors of Prof. Hough, of the Dearborn Observatory, Chicago, who for several years has made the planet Jupiter a special study, we are indebted for the most accurate value of his rotatory period. The received value for the past hundred years has been:

	R. = $9^{h.}\ 55^{m.}\ 30^{s.}$
By great red spot, 1877	" = $9^{h.}\ 55^{m.}\ 34{\cdot}2^{s.}$
By great red spot, 1884–'85	" = $9^{h.}\ 55^{m.}\ 40{\cdot}4^{s.}$
Mean rotation from Sept. 25, 1879, to June 29, 1885, = 2,104 days = 5,086 rotations	" = $9^{h.}\ 55^{m.}\ 37{\cdot}4^{s.}$
Hough's probable value of this element, as deduced from the equatorial white spots, is	" = $9^{h.}\ 50^{m.}\ 09{\cdot}8^{s.}$

Comets.—Prof. W. Tempel, of Florence, Italy, while searching for Encke's comet, on the evening of Dec. 13, 1884, ran upon a nebulous object of exceeding faintness, which proved to be the expected comet. Its apparent position was in R. A. $22^{h}\ 44^{m}\ 25{\cdot}63^{s}$, Dec. + 3° 44′ 26·3″. This was its twenty-ninth return to perihelion since its discovery on Jan. 17, 1786, by Mechain. Its period is the shortest of all the periodic comets, being 3·3 years. As heretofore, it exhibited only a short tail (a characteristic of all the known periodics, except Halley's).

Its period is slowly diminishing, having, since 1786, shortened 3¾ days. No satisfactory explanation of this diminution has been offered. It passed its perihelion on March 7, 1885.

Barnard's comet (I, 1885), the first discovered of the year, was picked up by Prof. Edward E. Barnard, Assistant Astronomer at Vanderbilt University Observatory, Nashville, Tenn., on July 7. It was observed at the Warner Observatory on the 8th, and at Harvard College Observatory on the 9th, at $17^{h.} 17^{m.} 31^{s.}$, G. M. T., in R. A. $17^{h.} 17^{m.} 48·4^{s.}$, Dec. — 6° 1′ 8″. It was at discovery a very faint object, and did not subsequently increase in brightness. A short tail, about 2′ in length, was on several occasions observed at the Warner Observatory, and perhaps elsewhere. Its prominent feature is its great perihelion distance, equal to 2·516, and greater than that of any recorded comet, with the exception of that of 1729. Its elements present no similarity to any preceding comet; hence, if it has before visited our system, it departed unobserved. If its orbit be a parabola (a fact not ascertained at this writing), it has never previously entered our system, nor will it return again to it, but will remain a wanderer through the stellar worlds, though a denizen of none. The nucleus gave a continuous spectrum over which the usual cometary bands could, with great difficulty because of excessive faintness, be distinguished.

The following elements of Barnard's comet have been computed by Prof. H. V. Egbert, of the Dudley Observatory:

Time of perihelion passage, 1885, Aug. 5·2869.
Distance from node to perihelion .... = 178° 21′ 43″
Longitude of node.......................... = 92° 17′ 27″
Inclination................................ = 80° 39′ 05″
Perihelion distance........................ = 2·516

Tempel's comet (II, 1867), discovered by Prof. Wilhelm Tempel in 1867, was soon found to have an elliptical orbit with a period of about six years. True to prediction, it returned in 1873, and again in 1879, and in 1885 was again due. M. Raoul Gautier circulated last year a finding ephemeris fixing the date of perihelion passage on Sept. 25, 1884, and of perigee (nearest the earth) on March 31, 1885. The perihelion distance in 1867 was 1,564, the earth's mean distance being taken as unity. These elements show that at perihelion passage in 1885 the distance will have increased by perturbation to 2,073. The nearest approach of the comet to the earth's orbit occurs at or very near perihelion, and it will appear that, under the most favorable conditions of the orbit of 1885, the theoretical intensity of light will not exceed one sixth of the value it might have attained in 1867. At aphelion in the present orbit the comet approaches that of Jupiter.

Armed with Gautier's ephemeris, in April of the present year a most determined effort to find it was made by all the great telescopes of the world, though without success. On April 6, while engaged in a search for it, Dr. Swift, with the sixteen-inch refractor of the Warner Observatory, found a nebulous object in R. A. $11^{h.} 54^{m.} 40^{s.}$, Dec. + 20° 3′, which, on the evening of the 8th, had disappeared. His description of it was, "Very faint, pretty large, round, and forms a right-angled triangle with two stars." Though the object was doubtless a comet, it differed a little too much in declination to have been Tempel's, unless, since its last appearance, it had been subjected to a greater perturbation in this co-ordinate than computation had predicted. A diligent though vain search to recover the lost object was made both at the Warner and Cambridge Observatories. The published announcement that the comet had been found in Europe was a mistake. The object seen was one of the many nebulæ in the region wherein the comet was looked for.

Tuttle's comet (II, 1885), unique in one respect at least, that it belongs neither to the group of short-period comets nor to those of long period, was found in 1790 by Mechain. Its periodicity was not suspected, and it was not again seen until re-discovered by Tuttle at Harvard College Observatory on Jan. 4, 1858. At its next return, in 1871, it was generally observed. It is now visible in the early morning sky, too near twilight to be well seen. It was first picked up at the observatory at Nice, France, on the morning of Aug. 9, 1885, and, two days later, was found at the Warner Observatory, Rochester, N. Y.

The annexed table includes all comets that are known to be periodic. Many others are supposed to be of this class. All of those tabulated have made one or more returns to perihelion since discovery, except Barnard's, Wolf's, and Denning's, but that these are periodics, with elements differing little from those here given them, is unquestioned. Olbers's comet of 1815, expected this year or the next, will increase the number to seventeen, if we include the comet of Biela, which in 1846 was disrupted into two parts. But, as neither fragment has been seen since 1852, it may be considered as irrecoverably lost.

On the evening of August 31, Mr. W. R. Brooks, an amateur astronomer of Phelps, N. Y., and an indefatigable comet-seeker, found a faint nebulous body in the constellation of the Hunting Dogs—Brooks's comet (III, 1885). Its cometary character being strongly suspected, he at once telegraphed his discovery to Dr. Swift, director of the Warner Observatory, which, in compliance with the conditions of the Warner prize, he was obliged to do. As there were five nebulæ in the immediate vicinity of the supposed comet, it was deemed advisable to delay the cabling of the intelligence until confirmation could be had. On the evening of Sept. 2 it was observed at both the Warner and Cambridge Observatories, whereupon Prof. Pickering, director of the latter institution, promptly cabled it to Kiel, Germany, the European center for astronomical telegrams. Thence all important astronomical discoveries are communicated to all the chief observatories of the Eastern Continent. From observations made on Sept. 2, 5, and 7, Prof. F. Holetschek has calculated the following elements of Brooks's comet:

Time of perihelion passage, 1885, Aug. 9 7302, Berlin mean time.
Distance from node to perihelion............ = 41° 21′ 54″
Longitude of node .... = 204° 50′ 39″
Inclination............................. = 59° 39′ 0″
Longitude of perihelion distance........ .... = 9·87497

THE PERIODIC COMETS.

NAME.	Period (years).	Perihelion distance, earth's = 1.	Aphelion distance, earth's = 1.	Distance from node to perihelion.	Longitude of node.	Inclination.	Eccentricity.	Direction of motion.
				° ′	° ′	° ′		
Encke's.............	3 30	0·342	4·10	183 56	334 34	12 53	0·8455	D
Tempel's I..........	5·20	1·34	4·66	185 07	121 1	12 46	0·5536	D
Barnard's...........	5·40	....	....	301 03	5 8	5 28	....	D
Swift's.............	5·50	1·07	5·14	106 13	296 51	5 23	0·6553	D
Brorsen's...........	5·56	0·62	5·66	14 55	101 20	29 23	0·8098	D
Winnecke's..........	5·64	0·78	5·50	165 12	111 31	11 17	0·7406	D
Tempel's II.........	6·00	1·77	4·82	159 25	78 46	9 46	0·4630	D
D'Arrest's..........	6·39	1·17	5·72	173 0	146 19	15 43	0·6278	D
Biela's north.......	6·59	0·86	6·17	109 20	246 5	12 33	0·7552	D
Biela's south.......	6·63	0·86	6·20	109 13	246 9	12 34	0·7561	D
Wolf's..............	6·73	....	....	172 42	206 21	25 16	....	D
Faye's..............	7·41	0·69	5·92	200 15	209 42	11 22	0·5574	D
Denning's...........	9·±	....	....	312 39	65 54	6 50	0 8240	D
Tuttle's............	13·78	1·03	10·51	206 47	269 17	54 17	0·8210	D
Pons-Brooks's.......	71·34	0·77	33·41	199 11	254 5	74 2	0·9549	D
Halley's............	76·37	0·59	35·30	112 43	57 15	17 45	0·9675	R

Minor Planets.—In view of the large number of these bodies already known, and the vast amount of labor involved in the computation of their ephemerides, astronomers begin to look upon the discovery of new ones with disfavor. The following table shows the number discovered during the current year:

No.	Name.	Discoverer.	Date of discovery.
(245)	Vera.	Pogson.	February 6, 1885.
(246)	Asporina.	Borelly.	March 6, 1885.
(247)	Eucrate.	Luther.	March 14, 1885.
(248)	Lamaia.	Palisa.	June 5, 1885.
(249)	......	Peters.	August 16, 1885.
(250)	......	Palisa.	September 3, 1885.

No. 244 has been given the name Sita. Of the entire group Æthra (No. 132) has the least perihelion distance = 1·604, and Andromache (No. 175) the greatest aphelion distance = 4·726, so that their orbits extend over a space of 4·726 — 1·604 = 3·122 of the earth's mean distance, or, in miles, =92,500,000 × 3·122 = 288,785,000 = the breadth of the asteroid zone, which, comparatively speaking, nearly covers the region between the perihelion point of Jupiter's orbit and the aphelion of the orbit of Mars. Hilda (No. 153) has the longest period = 7·86 years, and Medusa (No. 149) the shortest = 3·11 years.

Motion of Stars in Line of Sight.—The direction of the displacement of the lines in the spectrum of any heavenly body at once indicates whether it be moving toward or from the earth, and the amount of such displacement marks its velocity. A displacement toward the red end of the spectrum tells with unvarying certainty that the earth and the object are receding from each other, while, on the other hand, if it move toward the violet end, it is indicative of a motion of approach. The rapid rotation of Jupiter on his axis, for instance, causes one limb to approach the observer, while the opposite limb recedes. The diameter of the planet and his rotatory period being known, it is easy to compute in miles the velocity with which the two limbs severally approach and recede. These displacements of the lines in direction are used as bases of comparison when observing the changes of the lines in the stars for determination of motion in the line of sight, or, in other words, whether moving toward or from us. This factor is indicated by the spectroscope; the telescope indicates lateral motion only.

For several years Sirius has been the subject of spectroscopic study by several astronomers, notably by Dr. Huggins, who, in 1868, called attention to the fact that the F line in Sirius was displaced toward the red end of the spectrum, and that it was receding from the earth at the rate of about twenty-nine miles a second. A few years later, by the same process, it was ascertained that this rate was diminishing, until, in 1881, its recession equaled only two miles a second, and soon thereafter ceased altogether. Shortly after the cessation of recessive motion, it became apparent that the star was approaching the earth, at first very slowly, but increasing in rapidity until, at the present, it has an approximate motion of about twenty-five miles a second. This singular truth, which, so far as known, is indeed unique, has given rise to a considerable controversy among astronomers. The most reasonable supposition as to its cause is that it is revolving round the center of the system, the star being both a double and a binary, and, as is well known, the brightest star in the heavens—the Dog Star of the Egyptians. The irregularities of the motion of Sirius (not in the line of sight) led to the prediction of a companion star, which, in 1862, was discovered by Alvan G. Clark. It will be of interest to note how these movements in the line of sight will throw light on the orbital motion of its companion. The following table shows the changes in the direction of motion in the line of sight as determined by spectroscopic observations made at the Royal Observatory, Greenwich, from 1875 to 1885, during opposition, which occurs in the winter months:

		Miles.	
1875–'76..	Sirius moving from us at the rate of	21·1	per sec.
1876–'77..	Sirius moving from us at the rate of	21·1	per sec.
1877–'78..	Sirius moving from us at the rate of	23·0	per sec.
1879–'80..	Sirius moving from us at the rate of	15·1	per sec.
1880–'81 .	Sirius moving from us at the rate of	11·3	per sec.
1881–'82..	Sirius moving from us at the rate of	2·1	per sec.
1882–'83..	Sirius moving toward us at the rate of	4·7	per sec.
1883–'84..	Sirius moving toward us at the rate of	19·4	per sec.
1884–'85..	Sirius moving toward us at the rate of	21·5	per sec.

At the present time Aldebaran, Capella, and Castor are receding, while Pollux, Sirius, Arcturus, and Alpha Cygni are, at different velocities, approaching our system.

Dr. Gould announces that the eighth-magnitude star, in R. A. $23^{h\cdot}$ $58^{m\cdot}$ $1{\cdot}85^{s\cdot}$, Dec. — 37° 58′ 18·76″ for 1875·0 = No. 1584 in hour XXIII of the Cordoba Zone Catalogue, has the very large annual proper motion, in a direction 66° 46′ to the east of south, of over 6·2″ of a great circle. But two stars whose proper motion exceeds the one just described are known—viz., Groombridge 1830, and Lacaille 9352. That of the former amounts to 6·976″, and of the latter to 6·9565″. The last mentioned, since it was catalogued by Lacaille in 1752, has moved over an arc of 15′ 30″.

Periodic Changes in the Spectrum of Beta Lyra.—Herr von Gothard has contributed to the "Astronomische Nachrichten" an elaborate paper on the changes seen in the spectrum of Beta Lyra during the past year. He secured thirty observations between the middle of February and the middle of November, and found the bands of D_3 to vary periodically from an almost dazzling brightness to disappearance. As this is a variable star, changing in somewhat less than thirteen days from 5·5 to 6·5 magnitude, it suggests the question whether the sodium lines in all variables do not change periodically, and also whether the period of change coincides with the period of variability.

New Nebulæ.—This department of practical astronomy has, for many years, been sadly neglected. Lately, however, a fresh interest has been awakened in the minds of a few astronomers possessing large telescopes, and it is to be hoped that ere long the study of the nebulæ may be prosecuted with some of the old-time vigor shown in the labors of the Herschels, D'Arrest, Lassel, Rosse, and Tempel. Only the latter two survive, and they, together with M. Stephan, of Marseilles, France, and Dr. Lewis Swift, of the Warner Observatory, Rochester, N. Y., are the only astronomers now engaged in a systematic search for new nebulæ. M. Stephan has recently contributed to the "Comptes Rendus" a catalogue of one hundred new ones, discovered by himself, reduced to the epoch of 1885·0. This and former catalogues published by him at various times contain about five hundred new nebulæ. Dr. Swift, since assuming the directorship of the Warner Observatory, has devoted his entire time to the search for nebulæ and comets, beginning his quest for the nebulæ on July 9, 1883. His first catalogue, containing approximate positions of one hundred new nebulæ reduced to the epoch of 1885·0, may be found in the "Astronomische Nachrichten," followed by the publication in the same journal of a second list of a like number.

So thoroughly has the sky been explored by comet-seekers that it may be truthfully averred that, north of 25° south declination, there is not a single undiscovered nebula as bright as Herschel's class I (bright). Of his class II (faint) there may remain a very few. Of his class III (very faint) there are probably several thousands that have escaped detection, which, including those already known, would bring the entire number up to about ten thousand. Since July 8, 1885, forty-six have been discovered at the Warner Observatory. In his first published catalogue, Dr. Swift has included twelve that are the property, by right of original discovery, of his son Edward, a lad of thirteen years.

Dr. Ralph Copeland's stellar nebulæ, like the stars, are mere points, and can only be determined by the spectra they give. During the autumn of 1884 five such objects were discovered by him at Dun Echt Observatory, Scotland, with the star spectroscope after the method of Prof. E. C. Pickering, of Harvard College Observatory, who has also discovered quite a number of the same class of objects.

Occultations.—The only star brighter than a 3½ magnitude occulted by the moon during 1885 is Alpha Tauri (Aldebaran), which to some part of the earth disappeared behind the moon thirteen times, or once in each month except September, when it was twice occulted; but three of the thirteen occultations were visible at Washington. Owing to the peculiar position of the moon's nodes, Aldebaran will have been successively occulted 44 times, viz., in 1884 4 times, in 1885 13 times, in 1886 12 times, in 1887 12 times, and in 1888 3 times. To the astronomer, occultations of stars by the moon are of great value, as they enable him to determine with greater accuracy the moon's diameter; to learn of her many inequalities, including the cause and amount of the acceleration of her mean motion, and help him to answer the unsolved problem, How much of this acceleration is due to a gradual decrease in the eccentricity of the earth's orbit, and how much to some other cause or causes? Venus suffered one occultation in 1885, Mercury three, Jupiter three, and Uranus ten, none of which were visible at Washington.

New Star in the Great Nebula in Andromeda.—On September 1 the astronomical world was startled by the telegraphic announcement that on the previous evening Prof. Hartwig, of the Observatory of Dorpat, Russia, had discovered a new star in the center of the great nebula in Andromeda. This is the most conspicuous nebula visible in northern latitudes, and is so distinctly seen with the naked eye as to be constantly announced as a new comet. Accounts have come down to us of its having been observed nearly a thousand years ago, and during this interval it has maintained an unvarying degree of brightness, so that it is reasonable to suppose that until now no change in its appearance has taken place since the creation of man.

Although some seven thousand nebulæ are telescopically visible, and a majority of them have been frequently observed since the time of Sir William Herschel, yet no previous well-attested instance of a star having thus suddenly appeared in a nebula is on record. The exception to this rule, usually cited in the case of T. Scorpii, is not well taken, as the star manifested itself in a cluster of stars, and not, as in the present case, in a nebula.

It would be difficult to overestimate the importance of this discovery, which, being a new experience to astronomers, must deservedly attract attention. It is evident that its coming is too recent and observations on it too few to warrant the framing at present of any hypothesis to account for its appearance, the source whence it came, the nature and cause of the change if produced from the nebula itself, and the duration of visibility. These are but a few of the many questions that confront the astronomer, and the results of telescopic, spectroscopic, and photographic investigations of both the star and the nebula will be awaited with an anxiety which no former astronomical phenomenon has awakened. It is a clean-cut star without the haziness belonging to a stellar center of a small bright condensation found in so many of the nebulæ. This sudden transformation of the center of a nebula into a star, or, in other words, into a sun like our own, is an event as stupendous as it is incomprehensible. Spectroscopic analysis of the star gives a continuous spectrum, which indicates that the light emanates from an incandescent solid or liquid. The nebula also gives the same spectrum, and shows that its light is not from heated gas, but that it is a mighty cluster of stars which no telescopic power has as yet been able to resolve.

The adherents of the nebular hypothesis will doubtless claim here a confirmation of their views regarding the formation of stellar and planetary systems from condensation of nebulous masses into suns, planets, and satellites.

The Lick Telescope.—The flint disk, thirty-eight inches in diameter, for the 36-inch telescope for the Lick Observatory on the summit of Mount Hamilton, California, has lain untouched for several years in the optical establishment of Alvan Clark & Sons, at Cambridgeport, Mass.. awaiting its counterpart, the crown disk. M. Feil & Son, of Paris, who contracted to furnish these glasses, have, after some twenty failures to produce a crown disk of the necessary optical perfection, at last achieved success, and the Messrs. Clark are in daily expectation of its arrival, and so, though the prospect of the completion of "the most powerful telescope in the world" is encouraging, yet some time must elapse before the finished telescope will be ready for shipment to its final destination. As the opticians can not determine without trial the focal length of the object-glass, so also until this factor shall have been ascertained the mammoth dome which is to cover it can not be planned. It is hoped that in two years both will have been completed, and the bequest of Mr. Lick for the construction of the "most powerful telescope in the world" will have produced the best as well as the largest refractor by six inches ever yet attempted.

Astronomical Prizes.—The Lalande prize for 1885 has been awarded to M. Radau for his various astronomical works, more particularly for his memoir on the theory of astronomical refractions.

The Valz prize was given to M. Ginzel for his discussion of forty-three ancient solar eclipses, total and annular. He has derived from this discussion a new determination of the numerical value of the secular acceleration of the moon's mean motion, which confirms the difference between theory and observation, though slightly lessening the amount.

At the annual meeting of the Royal Astronomical Society of England, in February, 1885, the council awarded the society's gold medal to Dr. Huggins for his researches in the motions of stars in the line of sight, and in the photographic spectra of stars and comets. This medal is presented to astronomers — regardless of nationality or of theme—for original research in any branch of astronomical literature. Four Americans — Profs. Bond, Newcomb, Hall, and Gould—have received it.

In 1881 Mr. H. H. Warner, the founder and endower of the observatory bearing his name, offered a prize of $200 in gold to each discoverer in the United States and Canada of a new and unexpected comet during that year. This offer gave such an impetus to comet-seeking as to induce its repetition, which has been continued through each subsequent year. In consequence, these discoveries in the United States have been threefold those of all the world besides. The recipients have been as follows: Schaeberle, one prize; Brooks, three prizes; Barnard, four prizes; Swift, three prizes. Mr. Warner has now standing, in addition, an offer of a prize of $200 for the best essay on the cause of the red sunsets of the past two years.

The annexed letter, recently received by Alvan Clark & Sons from the eminent Russian astronomer, Otto Struve, is itself the best explanation of the prize under consideration, and also of the reasons for its award:

PULKOWA, *July* 23, 1885.

ALVAN CLARK & SONS—*My dear Friends:* I am asked by the Government to inform you that, in acknowledgment of the excellent performance of the great object-glass furnished by your firm, his Majesty the Emperor has been graciously pleased to confer upon you the Golden Honorary Medal of the Empire. The value of the gift is enhanced by the circumstance that this medal is given very rarely, and only for quite extraordinary merit. You and Repsold are the first who will receive it from the present Emperor, Alexander III. This circumstance produces some delay in the transmission, as the Emperor desires that the medal shall bear his portrait, and not those of his predecessors. Therefore, the stamp must be newly engraved. When that be done you will receive the medal through the Russian minister at Washington.

Very truly yours,

OTTO STRUVE.

NOTE.—Only the object-glass (thirty inches in diameter) was made by the Clarks, the mounting and accessories having been done by the Messrs. Repsold, of Hamburg, which explains the dual prizes.

The Cipher Code-System.—A brief, accurate, and inexpensive code-system of telegraphing and cabling announcements of cometary and other astronomical discoveries has been a long-felt desideratum. To telegraph to Europe in its completeness the elements of a cometary orbit, the dates from which those elements were computed, together with an ephemeris, though giving only four positions of the object in right ascension in hours, minutes, and seconds of time, in declination in degrees, minutes, and seconds of arc, and several other necessary data, became an expense too great to be borne. And, in addition, the dispatch, in a majority of cases, would, by errors on the part of the telegraph operator or of the transcriber—perhaps of both—be entirely worthless when received, with no means of correction at hand. To remedy these defects, Prof. Seth C. Chandler, Jr., and Mr. John Ritchie, Jr., both of Harvard College Observatory, Cambridge, Mass., have invented a cipher code-system, the utility and perfect working of which has, after many trials, been fully recognized and adopted by the astronomers of both hemispheres. A complete description of the system and of its workings was published by the inventors in "Science Observer," vol. iii, Nos. 9 and 10 (double No.). As briefly as is consistent with a proper comprehension of the subject, the general plan is as follows: The book from which the ciphers for this code are obtained is "Worcester's Comprehensive Dictionary," revised edition of 1876, containing more than 390 pages, which has generally one hundred or more words on a page, rendering it possible to express any whole number from 1 to 39,000 by a single word. Thus, for example, 27,348 can be expressed by the word "lop," it being the 48th word on page 273. In like manner, 268° 18′ may be signified by the 18th word on page 268 ("level"). April $14^{d.}$ $10^{h.}$ $48^{m.}$ = April $14^{d.}$ 45, being the 134th day of the year (135th of leap-year), may be represented by the 45th word on page 134 ("crush"), etc. In transmitting a cometary ephemeris and the elements of its orbit, Greenwich mean time is to be understood. For declination, north polar distance is in all cases to be used, to avoid the distinction of north and south; inclination is to be reckoned from 0° to 180°; perihelion distance to be given directly and not by its logarithm; distance of perihelion from node, instead of longitude of perihelion, is to be employed, and right ascension is to be given in arc instead of time.

One of the excellences of this code-system is the introduction of a control-word by means of which the receiver is enabled to detect the incorporation of an error in the message received. It is determined by adding together the numbers expressing, 1, the time of perihelion passage; 2, distance of perihelion from node; 3, longitude of node; 4, inclination; and 5, perihelion distance. The amount resulting to be divided by four, in order that the number obtained may be always within the limit of a book of 400 pages; for example:

Time of perihelion passage	=	311 91
Distance of perihelion from node	=	99 34
Longitude of node	=	300 50
Inclination	=	7 22
Perihelion distance	=	110 49
Sum	=	4)829 46
Control-word	=	207 36

= 36th word on page 207 ("gleby").

Care must be taken in adding the above to supply a cipher as the second digit from the right, when the minutes are fewer than ten, or when the decimal of a day contains hundreds only. Thus, 135° 5′ is represented by 135 05, and 147^{d} 03 by 147 03.

Perhaps the practical working of the system can not be better or more forcibly illustrated than by the insertion here of a seventeen-word cablegram sent from Harvard College Observatory to the observatory of Lord Crawford, at Dun Echt, Scotland: "Outshine, stigmatic, intercession, appeasableness, auctionary." Control-word, estreat 2d. "Balance, occident, attain, ordnance, assent, pachyderm, around, paring, archetype, fishmonger, purulent." This message, giving the elements and ephemeris of Pechüle's comet, when translated is, in detail, shown on the next page.

The message, though consisting of but seventeen words, conveyed all of the information included in the tables, viz., the elements of the orbit, the dates of the observations from which the elements were calculated, a control-word to insure correctness of interpretation, an ephemeris of four positions, and the light-variation corresponding to the ephemeris.

The dictionary proper begins at page 41, and, to obviate the difficulty arising from the omission of the first forty pages, it has been proposed to supply the pages from 400 to 441 inclusive, though in all cases the number is to be considered what it really is; i. e., without the 4. Thus, $0^{d}.53$ is to be indicated by the 53d word on page 400 ("smear"), and 13° 26′ by the 26th word on page 413 ("still"). When it is desired to express a whole number of days without a fraction, as $215^{d}.00$, or a whole number of degrees without minutes, as 265° 00′, the cipher code fails, as there is no 0th word on any page. When this happens, if the first word on the page be used, but slight error will accrue, and will, in almost every case, give results sufficiently exact. Were it desired to express 48°.00 exactly, it might be done by calling it 47° 60′, when the 60th word on page 47 ("admonitive") would represent it. Should the indicated word prove to be a compound one, as "letter-press," "stone-work," etc., it will be necessary to use the preceding or following one, and thus introduce a slight error.

Time of perihelion passage, November 9, '62, G. M. time.................... = 314 62 = outshine.
Perihelion from node .... = 13° 21′ .... = 13 21 = stigmatic.
Longitude of node .... = 249° 39′ .... = 249 39 = intercession.
Inclination .... = 60° 41′ .... = 60 41 = appeasableness.
Perihelion distance............. = 67° 75′ .... = 67 75 = auctionary.
4)705 38
Control-word.. = 176 34 = estreat.
Date of discovery, January.............. 7
Light at date of discovery.............. = 1·00
Sum..................................... 71·00 .... = 71 00 = balance.
R. A. $20^{h.}\ 32^{m.}\ 26^{s.}$.................. = 308° 7′ .... = 308 07 = occident.
Dec. + 22° 50′ N. P. D. = 67° 10′.. = 67 10 = attain.
R. A. $20^{h.}\ 49^{m.}\ 52^{s.}$.................. = 312° 28′ .... = 312 28 = ordnance.
Dec. + 24° 31′ N. P. D. = 65° 29′.. = 65 29 = assent.
R. A. $21^{h.}\ 6^{m.}\ 53^{s.}$................... = 316° 43′ .... = 316 43 = pachyderm.
Dec. + 26° 4′ N. P. D. = 63° 56′... = 63 56 = around.
R. A. $21^{h.}\ 23^{m.}\ 25^{s.}$.................. = 320° 51′ .... = 320 51 = paring.
Dec. + 27° 28′ N. P. D. = 62° 32′.. = 62 32 = archetype.
January 19.............................. = 19
Light on Jan. 19 .... = 0·66
Sum... .... 190 66 .... = 190 66 = fish-monger.
First observation, Dec. 18 = 353d day of the year.
Second $4^{d.}$ interval = Dec. 22 = 4
Third $8^{d.}$ " = Dec. 26 = 8
Sum. .... 353 48 .... = 353 48 = purulent.

Meteors.—In 1885 ordinary and extraordinary meteors (bolides) appeared with about the same frequency as in other years. Probably the one most interesting—the brightest, and, presumably, the largest—seen in this country since the memorable one of 1860, passed over the zenith of central New York at about $9^{h.}$ $10^{m.}$, 75th meridian time, on July 17. Its direction was from southwest to northeast. It was witnessed from northern Pennsylvania, New Jersey, western New England, all of New York State, and a large portion of Canada. Its real magnitude must have been great, and its brilliance surpassing conception, to have lighted, as it did at one and the same instant, the entire area of these regions with an illumination almost equal to daylight. The random statements made and published of this as well as of every other kindred phenomenon render abortive the attempt to compute its height, size, and velocity.

At about ten o'clock in the evening of Aug. 20, another meteor was seen from Rochester, N. Y., and the surrounding region, pursuing very nearly the same path as that of July 17. Though a meteor of the first class, it was much inferior to the former in size and splendor.

The November meteoric shower of 1884 was, as predicted, an inferior one. No display of any importance need be looked for until the return of the thirty-three-year period, on the morning of Nov. 15, 1899.

The August shower (usually called the 10th of August shower) really begins about the 22d of July and ends abruptly on Aug. 11 or 12. This is according to the observation of Dr. Swift, of Rochester, N. Y., and is the result of several years of study of this shower. It is fully confirmed by Mr. Denning, of England, who is an authority in meteoric astronomy, as he makes that branch his special work. The radient of this shower is near the well-known cluster in Perseus, and the display of 1885 was nearly equal to that of former years. The radient of the November shower (in our age) is in Leo, and embraces that well-known group of stars called the Sickle.

Bibliography.—The "Proceedings of the Royal Irish Academy" for July, 1884, contains a catalogue of known variable stars by J. E. Gore, F. R. A. S. It occupies sixty-two pages, and will be useful to those interested in this class of stars. A paper by John Maguire, on total solar eclipses visible in the British Isles from A. D. 878 to 1724, was read before the Royal Astronomical Society of England. From this it appears that London was only twice visited by total eclipses during the period named, viz., in 878 and in 1715. Dublin also had two, and Edinburgh experienced five. It shows, also, that there is a small place on the coast of Ireland where no total eclipse could have been seen during the 837 years comprised between the given dates. Dr. Theodor Oppolzer, of Vienna, is about to publish a list, prepared under his direction, of the dates of solar and lunar eclipses from B. C. 1207 to A. D. 2161. There are 8,000 of the former and 5,200 of the latter class. He greatly favors the new system of reckoning time, and adopts it in the catalogue just mentioned. The micrometric measurements of double stars by Baron Dembouski have been published in two volumes, which include also a short biographical sketch of the astronomer himself. These books are valuable additions to the literature of observational astronomy, and to double-star observers must be of priceless value. The "Sidereal Messenger," the only astronomical journal published on this continent, is issued monthly by Prof. W. W. Payne, of Northfield, Minn.

AUSTRALASIA. The British colonies of Australasia all possess responsible government except Western Australia. The Legislature of New South Wales, the oldest colony, consists of two chambers, the Legislative Council, of 21 members, nominated by the Crown, and the Legislative Assembly, consisting of 119 members elected by universal manhood suffrage by secret ballot. In Victoria both branches are elective: the Legislative Council, numbering 42 members, elected for six years, one third retiring every two years, by citizens possessing freehold property of £10 annual ratable value, or occupying rented or leasehold property of £25 ratable value, and members of the liberal professions; the Assembly, by universal suffrage for three years. In Queensland there are 34 members in the Legislative Council, nominated by the Crown for life, and 55 in the Assembly, elected by universal suffrage for five years. In South Australia the 24 members of the Legislative Council are elected for nine years by voters possessing the property qualification required. Eight are elected every three years, two from each district, by the whole colony voting as a single district. The 52 members of the House of Assembly are elected by universal suffrage. The Legislative Council can not be dissolved by the executive. In Tasmania there are 16 members in the Legislative Council, elected for six years by citizens possessing a high property qualification, freeholds of £50, or leaseholds of £200 annual value, and 32 in the House of Assembly, elected by smaller freeholders, and householders paying £7 rent, for five years. In New Zealand the Legislative Council consists of 50 members appointed for life by the Crown, and the House of Representatives of 95 members, elected for three years by universal suffrage. There are four native representatives, elected by Maori freeholders or rate-payers. The counties and boroughs possess a certain amount of local self-government and power to assess rates. In Western Australia there is a Legislative Council, composed of 8 nominated and 16 elective members. In all the colonies the executive power is vested in a Governor appointed from England. Except Western Australia, legislative and administrative business is directed by a responsible ministry, as in Great Britain.

The area of the several colonies and their estimated population on Dec. 31, 1883, are as follow:

COLONIES.	Square Miles.	Population.
New South Wales	809,175	869.310
Victoria	87,884	931,790
South Australia	903,690	304,515
Queensland	668,224	287,475
Tasmania	26,215	126,220
Western Australia	975,920	31,700
New Zealand	104,027	540,887
Total	3,075,135	3,091,897

The Federal Council of Australasia.—In pursuance of the conclusions of the Intercolonial Federation Conference that met at Sidney in the winter of 1883–'84 a permissive bill was brought forward in the British Parliament in 1885. In preparing the bill the Colonial Office was in constant communication with the cabinet ministers of the various colonies. Owing to divergencies between the colonial governments, Lord Derby's enabling bill was not completed until late in the session. The subject of imperial federation was prominent in the public mind at the time, and had many warm advocates in both parties. The English feeling toward Australia was particularly kindly because of the sending of the Australian contingent to the Soudan, although the offer when made by the New South Wales Premier was but coldly accepted by Lord Derby. The Federal Council bill was, for these reasons, one of the measures that survived the change of ministry, and was passed without serious opposition. During its elaboration New South Wales and New Zealand desired to have as loose and elastic a form of federation as possible. They were very jealous of any invasion of the legislative powers and independence of the individual colonies. The other colonies, following the lead of Victoria, wished to clothe the Council, within the range of subjects intrusted to its consideration, with real powers, and to make the union as binding and durable as possible. At the suggestion of the New South Wales Government, a clause was inserted allowing any colony to withdraw from the federation at any time. The other colonies wished the clause to be struck out; but for fear that New South Wales would refuse to join the federation, it was retained.

Decisions of the Council, recorded and approved before the withdrawal of a colony, were, however, made binding on that colony. This feature was disapproved by Sir Alexander Stuart, the Premier of New South Wales, and after his recovery from sickness in July he asked that it should be altered, saying that otherwise he would be unable to advocate the adoption of the bill in the Colonial Legislature.

The New Zealand ministry proposed in May that all measures passed by the Council should be subject to the ratification of the separate legislatures, but this suggestion was not adopted. The burning question of the annexation of Pacific islands by foreign powers, called forth by the colonization movement in Germany and France, and that of the proximity of penal settlements and the influx of criminals, suggested by the French recidivist bill, gave the first impulse to the federation project. The question of a union for the organization of military and naval defenses became prominent during the Afghan complications. There are many commercial and social subjects on which common laws and common action have been a crying need, yet for which the colonies would not lay aside their jealous rivalries without the impulsion given by these exaggerated anticipations of outside danger. The enabling bill gives them the choice of any degree of union, between their present inconvenient separation and a close federation, with a common army, a common tariff, unified laws, and the amalgamation of any of their institutions.

The Federal Council enabling bill provides for the constitution of a Federal Council by such of the Australasian colonies as desire to join in the arrangement for the purpose of dealing with such matters of common interest, in respect to which united action is desirable, as can be dealt with without unduly interfering with the management of internal affairs by the respective legislatures. On the Federal Council each Crown colony is to be represented by one, and each other colony by two members, to be appointed in whatever manner and for whatever term the separate legislatures may determine. The number of representatives may be increased at the request of the colonies. The matters that are subject to the legislative authority of the Federal Council are the following: (1) The relations of Australasia with the islands of the Pacific; (2) the prevention of the influx of criminals; (3) fisheries beyond the territorial limits of the colonies; (4) service of civil process outside of the jurisdiction of the colony issuing it; (5) the enforcement of judgments beyond the limits of a colony; (6) the enforcement of criminal process and the extradition of offenders, including deserters of wives and children and deserters from the imperial or colonial military forces; (7) the custody of offenders on board ships beyond territorial limits; (8) any matter that may be referred to the Council by the Crown at the request of the Colonial Legislature; (9) any of certain enumerated matters that may be referred to the Council by the legislatures of any two colonies—viz., general defenses, quarantine, patents, copyright, bills of exchange and promissory notes, uniformity of weights and measures, recognition of marriages and decrees of divorce, naturalization, status of corporations and joint stock companies in other colonies, and any other matter of general Australasian interest as to which it is desirable that there should be a law of general application. In these latter matters the decisions of the Council are binding only on the two colonies initiating the measures, and on such others as may ratify them by their legislatures. Any two or more colonies may refer to the determination of the Council any questions affecting them or their relations with one another. The Imperial Government reserves to itself a veto power over the decisions of the Council. In respect to the first three matters, namely, the relations of Australasia with the Pacific islands, the influx of criminals, and the fisheries, every bill must be submitted to the home Government. In respect to other matters the Governor of the colony in which the Council is sitting may approve or veto a measure in the name of the Queen, or may reserve it for the consideration of the home authorities, or may specify amendments subject to which he will assent to the bill. Yet his superiors can overrule his action and annul any bill that he has allowed at any time within a year after its receipt in England. The Council is authorized to make representations or recommendations to the Imperial Government in respect to any matters of general Australasian interest or to the relations of the colonies with the possessions of foreign powers. The representation on the Council of a majority of the colonies constitutes a quorum. The Council elects one of its members for President each session. The President has an equal vote with the other members. All questions are decided by a majority vote of the members present. Each member is required to swear or affirm his allegiance to the Queen. The Council will make standing orders for the conduct of business, and appoint temporary or permanent committees to perform duties committed to them, either during the session or not. Expenditures connected with the business of the Council are defrayed in the first instance by the colony in which they are incurred, but are ultimately assessed on the colonies in proportion to their population. To avoid rivalries the Council holds its first session at Hobart, in Tasmania, and will determine for itself where subsequent sessions are to be held. A session is to be held at least once in every two years. At the request of any three governors a special session may be summoned to deal with special matters. The Council will be summoned and prorogued by the governor of the colony in which the session is held at the time. The respective colonies may join or remain outside of the federation as they see fit, or, having joined, may afterward withdraw. The colonies affected are those of Fiji, New Zealand, New South Wales, Queensland, Tasmania, Victoria, and Western Australia and the Province of South Australia, as well as any other colonies that may be created in Australasia.

The Annexation of Southern New Guinea.—The "White Book," issued by the German Chancellor on the diplomatic dispute with England in reference to the new German colonies, and the English "Blue Book" on the same subject, tended to confirm the suspicion of the Australian colonists that the German annexation of the northern shore of New Guinea west of Huon Bay and east of Astrolabe Bay was conducted in accordance with a secret understanding with the English ministry. Sir Thomas McIlwraith's proclamation of British sovereignty over New Guinea was overruled by the home Government on the ground that there was no evidence of an intention on the part of any foreign power to make a settlement on the shores of New Guinea. In July, 1883, Lord Derby announced in Parliament that it would be regarded as an "unfriendly act" for a foreign government to establish a settlement in New Guinea, and a few days later said that if there were any evidence of such an intention on the part of a foreign power the Colonial Government could communicate with the home

Government by telegraph, and action could be taken within a few hours. As late as Oct. 24, 1884, just before the German occupation of King William's Land, the under-secretary for the colonies denied that there was an understanding with Germany as to the occupation of the northern portion of New Guinea. The understanding, if it existed, must have been reached suddenly; though, according to the statement of Count Herbert Bismarck, when the grievances of Germany against England with regard to delays and hindrances to her colonial policy were confidentially recited to Earl Granville some months before, the English minister asked him whether Germany wanted New Guinea. The question was involved with matters pertaining to Angra Pequeña, Egypt, and other parts of the imperial policy, in such a way that when Germany finally took possession of the fairest portion of New Guinea, the indictment of unfriendliness was shifted to the charge of Great Britain. After the German annexation was effected, a telegram came from London saying that Lord Derby had known of the intention of the German Government for months. The colonial authorities on their part complained in direct and vigorous official language of the neglect of the Imperial Government to fulfill its promises to them. The proclamation of British suzerainty over the fever-scourged coast opposite Queensland hardly softened the angry irritation of the colonists. Mr. Service, the Premier of Victoria, ended a memorandum addressed to the Governor of the colony, wherein he expressed his indignation at the want of response of the Imperial Government to the aspirations of the colonies, and its extreme unwisdom in slighting the perpetual and strong representations addressed to it unceasingly for eighteen months on the subject of New Guinea, with a request that steps be authorized by telegraph to save to Australia such of the neighboring islands as are yet available. In addition to the protectorate over the southern shore of New Guinea the colonists obtained the annexation, proclaimed by the commodore of the Australian squadron, of the Luisiade group and Huon Bay, important strategical positions commanding the new German possessions and the approaches to the Australian shore. The assumed fact that the home Government had acceeded to the German occupation of Cape King William without consulting the colonial authorities, and in despite of their earnest objections, exasperated the colonists more than any difference that has occurred between them and the mother-country since the attempt to re-introduce transportation. The feeling that questions affecting their interests, and even their security, should be decided with reference to the continental policy of Great Britain, called forth serious thoughts of separation from the mother-country. Under the excitement of the hour, the only alternative seemed to them to be an Imperial Federation in which they should have a voice in the foreign policy of England. The Prime Minister of Victoria put forth a manifesto on Jan. 12, 1885, in which he complained that the colonies were subject to an "unqualified" and an "antiquated autocracy" in imperial matters, a humiliating position, and declared that, whatever scheme of federation should be decided upon, it must be one that, "while it can not take away from us anything that we at present possess, must give to the colonies more tangible influence and more legal and formal authority than they have now."

Commodore Erskine, in November and December, 1884, raised the British flag on the south coast, and with curious ceremonial took the native tribes under imperial protection and made the persons who seemed to be the paramount chiefs in the different districts delegates of the Queen. The new protectorate of British New Guinea extended at first from the East Cape to the Dutch boundary, and was then enlarged, at the request of the colonists, so as to take in the north shore of East Cape and Huon Cape as well as the adjacent islands. The British flag was raised in the beginning of January over the various islands of the Luisiade Archipelago, east of New Guinea, over Woodlark Island to the north of these, and over the smaller Long and Rook Islands off the coast of the German colony.

The friction between the English and Colonial governments prevented the administration provided for British New Guinea from going into operation for a long time after the protectorate was established. The Colonial governments promised to contribute £15,000 toward the expenses of annexing New Guinea. They were disposed to withdraw that offer when the home Government disappointed them by establishing a mere protectorate over a part of the island and then expected them to increase their contribution and to bear the whole cost of administration. Gen. Scratchley was appointed special commissioner for the protectorate of New Guinea and deputy commissioner for the western Pacific. For six months or more that popular and energetic officer went from capital to capital trying to get this question of revenue settled. The Colonial Governments refused to increase their promised appropriations, and demanded that the Imperial Government should participate in the expenditure on New Guinea. The authorities in Downing Street were at length induced to alter their purposes in important particulars so as to meet the views of the Australians. In May, 1885, it was announced that the British Government —taking into consideration the German occupation of a part of New Guinea contrary to the wishes of the colonies, which might increase the obligations and difficulties of the position, and the duty of protecting native interests, which might reduce the local revenue—would entertain the question of an imperial contribution. The message gave as another reason the decision of the Imperial Government to change the protectorate into a sovereignty, involving the provision of effective jurisdiction over natives and foreigners, the establishment of courts, and machinery for civil administration. The Colonial governments were invited to consult with Gen. Scratchley with regard to the extent of territory inland to be annexed, and to settle the probable annual cost and the contributions they proposed to pay. The proclamation of sovereignty was postponed until the financial arrangements were concluded. The high commissioner proposed to maintain his headquarters on the water, and asked the Colonial Governments to advance, in the form of a loan, £20,000 to provide a steamer and £5,000 to build two stations on shore, at Port Moresby and South Cape, if these were found to be suitable localities. The annual expenses he estimated at £20,000, including £8,000 for staff, deputy commissioners, and police, £8,000 for manning the steamer and patrol-boats, £1,000 for coal, and £3,000 for exploration, surveys, and mails.

Australian Military and Naval Defenses.—Since volunteering began in Australia, upward of 80,000 men have been trained in the art of war. The total number of males between the ages of twenty and forty years was, in 1881, 451,700. Not less than £8,000,000 sterling has been expended by the colonies on their defenses. Volunteering was encouraged by liberal land-grant orders given to men who served five years or longer. In 1879 there were over 16,000 volunteers in active service. In the year 1877 the British Government sent out Sir William Jervois and Col. Scratchley to advise the colonial authorities upon the defenses. In accordance with their recommendations forts have been constructed, cannon imported, a trained artillery force established, and a nucleus of a standing army formed in several colonies, around which the volunteer forces can rally. The number of trained men or regulars in Australia, including the artillery, militia, and torpedo corps, exceeds 2,500.

The question of colonial defense enters prominently into the federation movement. Three distinct views are held upon the subject in Australia. One party, the advocates of colonial federation, is in favor of a local defense-union between the colonies, with a common budget and a central administration for military and naval affairs. Another party, representing the idea of Imperial federation, desires to merge the colonial forces into the British army and navy, and to assess upon the colonies a proportional share of the cost of the entire establishment. This would be a return in practice to the system that existed before the withdrawal of the Imperial troops in 1865, with the important difference that the British taxpayer, instead of feeling burdened with the expense and responsibility of defending helpless and dependent colonies, would look upon the population and wealth of the colonies as an augmentation of the military resources of the Empire. A third party approves of an inter-colonial union for land defense, and the creation of an Australian army, the beginnings of which have been made in the separate colonies, but would leave naval defenses in charge of the Imperial authorities, the colonies contributing a fair share of the cost.

In the British House of Lords Viscount Sidmouth proposed that help should be granted the colonies in the form of a number of naval officers authorized to train their sailors and organize a navy, and especially a torpedo force, which would at least constitute their first line of defense. Lord Northbrook replied that many officers would be glad to go out as instructors. He publicly invited from the agents-general the formulation of a scheme for the organization of local naval defenses for the colonies. The Conservative Government issued in the beginning of July a circular dispatch on the subject of Australian naval defenses, and especially the defense of Albany, in Western Australia. Sir Napier Broome, while in England, called attention to the danger of leaving King George's Sound, on which is the town of Albany, open to seizure by an enemy, who from so convenient a base could do damage to British commerce in a few weeks to the extent of millions sterling. Important works for the protection of Port Philip and Melbourne were constructed on the responsibility of the Victoria ministry during the parliamentary vacation, when war seemed imminent. When the sessions opened the Government was not criticised for building the fortifications, but was attacked for awarding contracts to colonial manufacturers when the materials could be obtained more cheaply from England.

The military forces maintained under arms in New South Wales number a little over 2,000 men, costing £85,000 a year. Victoria has about 3,500, including 400 in the navy. When her re-organization is complete she will possess thirteen war vessels, including four cruisers and three torpedo-boats. New Zealand keeps up a large military force, not less than 6,000 men, on account of the Maoris. This colony has lately purchased four torpedo-boats. Queensland has over 500 volunteers, two gunboats, and one torpedo-boat. South Australia is building a cruiser. Tasmania has a rifle corps and an artillery corps, numbering together 550 men. Western Australia has a volunteer force of about the same number.

The Australian Contingent in the Soudan.—The Australian people took but a slight interest in the earlier Egyptian campaigns, which were supposed to be the sequels of an interference in Egypt on behalf of the bondholders. The Khartoum relief expedition, however, they followed with watchful attention. When tidings came that the heroic Gordon was slain, the shock and grief gave rise to a sympathetic impulse to help the mother-country to wipe out the blot on British honor. This feeling was strongest in New South Wales, where there was the least resentment on account of New Guinea. Mr. Dally, the acting Premier, telegraphed an offer to send a body of men at the expense of the colony. Mr. Service, Premier of the rival colony of Victoria, tendered aid of the same kind. Many thousand pounds were subscribed by private individuals toward the expenses. Men whose wages were three times the soldiers' pay of 2*s.* 6*d.* per diem volunteered eagerly for the distant expedition.

The home Government accepted the offer of the colony that was foremost and most enthusiastic in its tender of assistance, but courteously declined that of the Victorian authorities. On the 3d of March, sixteen days after the acceptance of the offer, the New South Wales contingent sailed from Sidney amid the cheers of the population. It was composed of 800 men of all arms of the service. The artillery was taken from the permanent force of the colony. All the rest of the men were volunteers. The corps was fully armed and equipped, provided with 200 horses, and supplied with all the necessary stores that could be obtained in the colony. The men were excellent in physique, but had no opportunity to drill, A considerable proportion of them were old soldiers who had served in the British army.

The ministers exceeded their constitutional powers in making the offer, in enlisting the men, and in spending the money. They assumed the responsibility in reliance on popular approval and a parliamentary vote of indemnity. A minority censured the step severely. Sir Henry Parkes, the retired Opposition leader, made himself the spokesman of the party that condemned the quixotic policy of a colony that paid for immigration sending away its best men and impairing its defensive resources to fight in a quarrel in which it had no immediate concern, and sacrificing lives and money without materially benefiting the mother-country.

The Australian troops were only six weeks in the Soudan when, in accordance with the decision of the English Ministry to abandon the campaign announced for the autumn, they were recalled. They suffered severely from heat and fever, but only eight men died. The Colonial Ministry offered their services for Afghanistan; but the English Government declared that they were not needed.

The Russian War-Scare.—The Afghan crisis, instead of strengthening the separatist sentiment developed during the excitement over New Guinea, had the effect of reawakening Australian loyalty to the Imperial connection. In all the colonies the authorities and the citizens co-operated in works of preparation and defense. The war spirit and the animosity against Russia were as strong as in England. The military activity was greatest in Queensland, the most exposed and weakest of the autonomous colonies. During the exciting weeks in April and the beginning of May, the defense force, which was in process of reorganization under a new act of Parliament, was called out for active service. Meetings were held for the formation of rifle and artillery corps. More than five thousand men were, within a few weeks, either under arms, or undergoing preliminary training. A larger number volunteered, but the Government was unable to supply them with small arms. Fort Lytton, at the mouth of the Brisbane river, was improved and enlarged, and earthworks and redoubts were thrown up along the coast near the capital. A boom was placed across the river, torpedoes were sunk in the channel, the buoys partially removed, and the beacon-lights extinguished. Gun-boats were extemporized, and steamers were offered as dispatch-boats by private citizens. Orders were given to sink the coal-ships at Townsville, Cooktown, and Thursday Island on the appearance of a suspicious craft. Private owners of vessels were ready to follow out Admiral Tryon's suggestion to destroy their property in order to keep it from falling into the hands of the enemy. At the principal strategic points earthworks were constructed and mounted with heavy cannon. After the fever subsided the corps maintained their drill, and the Government followed up a plan for improving the coast defenses by connecting the points of observation on the coast with Brisbane by telegraph, and by constructing strong fortifications at Thursday Island, the strategical key to Torres Straits, and laying a cable to the mainland.

The American Postal Route.—In consequence of the failure of Congress to increase the subsidy for the Australian mail-service, and of the refusal of the United States Executive to distribute among the steamship-lines an appropriation made available by act of Congress, the Pacific Mail Steamship Company gave notice that the line between San Francisco and Sidney, *via* New Zealand, would be discontinued after Nov. 1, 1885. This line has been supported since it was started, in 1874, mainly by subsidies from the colonies of New South Wales and New Zealand. The other colonies prefer to send their mails by way of the Cape of Good Hope or the Suez Canal. The two colonies have long complained of the meagerness of the allowance contributed by the United States. At last, New South Wales announced the discontinuance of her subsidy after Nov. 1, 1885. New Zealand was anxious to preserve this mail route, which is much quicker than the Cape route, and offered to furnish two thirds of the necessary subsidy if the United States would pay the rest. As no such arrangement was made, the Colonial Government gave notice of the termination of its contract with the Steamship Company on the same date. The cessation of the Australian steamship service is likely to have an unfavorable effect upon American trade with the Australasian colonies. Since the organization of the line the export trade has increased in value from $3,785,098 in 1874 to $9,225,459 in 1884. There was an excess of exports in the latter year, exclusive of $3,664,344 of specie imported, amounting to $4,848,994. This gain was largely due to the purchases of colonists who traveled by the American route and visited the markets and manufactories of the United States on their way to or from Europe. The service under the Pacific Mail Company's contract was performed by three steamers, one belonging to the company, and two to John Elder, of Glasgow. Although the American companies refused to accept both sea and inland postage, a combination was formed between the house of Elder and that of Spreckels, of San Francisco, by which the route will be continued from Nov. 21 by two English and one American steamer, as before, receiving from the American Government sea-postage only, about $150,000 a year.

The Labor-Traffic in the Southern Pacific.—The Queensland Ministry represents a popular party that is opposed to any kind of black labor, coolie, Chinese, Malay, or Kanaka. One of their first enactments was a measure amending the Pacific Islands Laborers act of 1880. They also framed more stringent regulations for the labor trade, which the sugar-planters named the "cast-iron rules," by which they say that the sugar industry has been ruined. The capitalists interested in the sugar plantations went so far as to demand the separation of Northern Queensland, the sugar-growing district, from the colony. The Hopeful trials of 1884 proved, however, that the system of Government inspection and the other checks provided in the new regulations were of no avail against the worst iniquities of the traffic. The revelations of these trials induced the Government to appoint a commission to investigate the methods pursued by recruiting agents and masters and crews of labor-ships in recruiting the natives of New Guinea and the Luisiade and D'Entrecasteaux groups of islands. The commissioners' report is based on the investigation of eight voyages, in connection with which nearly five hundred witnesses were examined. In all these voyages recruiting was conducted from the canoes of the natives, which were encountered on the fishing-grounds in the coral reefs, or were paddled out to reconnoiter the labor-ships, or to barter fruits for tobacco. For the latter purpose the islanders often came aboard the vessels. For tomahawks, knives, tobacco, and calico, temptingly displayed by the recruiting agents, parents or relatives were persuaded to sell youths to the slave-dealers. Their authority over the individuals thus recruited was not inquired into, and when the latter resisted they were compelled to go by force and threats. The terms of service and the duration of their exile were seldom known to any of the natives concerned in the bargain. In the voyage of the Hopeful, canoes were wrecked, and their occupants captured in the water, raids were made on shore, villages burned, and many persons murdered. A large proportion of the Kanakas crammed into the hold of the ship were violently kidnapped. Similar practices took place in one of the other voyages. In the other cases the natives were decoyed away on the pretense of employment on shipboard or in the *bêche-de-mer* fisheries for a few days or weeks, or of a pleasure-trip to "white man's island." In no instance were they regularly engaged, as the law prescribed, for three years' hard and continuous work on the sugar plantations. When they reached the plantations and learned that they were to be retained in practical slavery for three years, many of them sickened and died from grief and despair. Their average rate of mortality during the first year of service was three per cent a month.

As the result of the revelations brought out in the inquiry, the Queensland Government decided to return to their native islands all the Polynesian laborers in the colony held by indentures, at the public expense, and to enforce against the owners of labor-ships the bonds of £500 each, given as a guarantee that the regulations would be observed. The sugar planters raised a great outcry at the prospect of being suddenly deprived of their laborers just at the crushing season. They denied the legality of the bold course taken by the Government, and threatened to bring suits for damages. Mr. Griffith, the premier, was not moved from his purpose. All the laborers who wished to return to their homes were released and returned to their islands by the Government. A few elected to remain in the colony.

The Queensland Government decided to compensate the planters for their loss. Of the 625 islanders brought to Queensland by the eight vessels whose doings had been investigated by the Commission, 97 had died within an average time of seven and a half months. The Polynesian inspectors in the districts where the "boys" were employed visited the 528 remaining ones and offered them the opportunity to return to their homes. It was found on inquiry that not a single one of the natives understood the nature of the contract into which he was supposed to have entered voluntarily. Most of them had been engaged by the labor agents for three moons. Missionaries reported that their relatives and tribesmen were incensed at their non-return at the end of that period. About 70, all on one plantation, elected to remain. More than 400 were collected at Mackay and Townsville and shipped on a steamer which cruised along the coast of New Guinea and the adjacent islands, calling at 49 places to return the "boys" to their homes. All those whose cases were investigated, and who were sent back, were natives of the lands comprised in the new crown domain. H. M. Chester, the police magistrate of Thursday Island, whom Sir Thomas McIlwraith intrusted with the duty of annexing New Guinea to Queensland, commanded the expedition, and Hugh H. Romilly, Deputy Commissioner for the Western Pacific, accompanied it and informed the natives that the reason for returning the laborers was that they were illegally recruited, and that the Queen would protect them from labor-ships henceforward. Each laborer was given from £3 to £6 worth of "trade," according to the length of time he was employed in the colony. Bundles of trade were given to the relatives of those who had died in captivity. Presents of tobacco, hoop-iron, and calico were freely distributed among the rest. These gifts not only propitiated the natives toward the newly-declared British sovereignty, but also forefended reprisals for the deaths of the laborers and the violent deeds of the kidnappers, as the acceptance of presents, according to native customs, wipes out blood feuds and condones all offenses. The bill for the compensation of the sugar planters deprived of their laborers provides that claims for loss of service of the returned Kanakas must be presented before Jan. 1, 1886, to be adjudicated upon by the Judge of the Southern District Court, assisted by two assessors, one appointed by the Government and one by the planters.

New South Wales.—The ministry is composed of the following members: Colonial Secretary and Premier, Alexander Stuart; Colonial Treasurer, George R. Dibbs; Minister of Justice, Henry E. Cohen; Minister of Public Instruction, W. J. Trickett; Attorney-General and Acting Colonial Secretary, W. Bede Dalley; Minister of Public Works, F. A. Wright; Postmaster-General, James Norton; Minister of Mines, Joseph P. Abbott; Secretary for Lands, James Squire Farnell. The Agent General for the colony in London is Sir Saul Samuel. The Governor is Lord Carrington, who succeeded Lord Augustus Loftus.

Of the 751,468 inhabitants in 1881, 516,612 were Protestants, 207,606 Catholics, 3,266 Jews, 9,345 Pagans, 1,042 of other beliefs, and 136,971 unspecified. The expenditure on the public schools in 1883 was £870,571. The total attendance in the schools of all classes was 189,983 pupils, with 4,543 teachers. The population on April 3, 1881, comprised 411,149 males and 340,319 females. The increase in ten years was 49 per cent. The net immigration in 1883 was 41,179 persons. The number of marriages in 1883 was 7,405; births, 31,281; deaths, 12,249. The population of Sidney, in 1884, was estimated at 250,000.

The total value of imports in 1883 was £20,960,157, of exports £19,886,018. The quantity of wool shipped to the United Kingdom in 1883 was 100,628,784 lbs., valued at £5,286,177. Tin of the value of £973,570, copper of the value of £437,675, tallow of the value of £362,137, and preserved meat of the value of £320,437 were exported to Great Britain in that year. The product of gold in 1883 was 122,256 ounces, valued at £341,124; of copper, 6,442 tons, value £368,409; of tin, 6,897 tons, value £341,124; of coal, 2,521,457 tons, value £1,201,941. The yield of wheat in 1884 was 4,345,437 bushels, acreage 289,757; the yield of maize, 4,538,604 bushels; of sugar, 35,220,640 lbs.; of wine, 589,604 gallons. There were in October, 1884, 34,000,000 sheep, 1,646,753 cattle, 326,964 horses, 189,050 pigs.

The area of the colony is about 207,000,000 acres. On Sept. 30, 1883, 36,553,416 acres were in private hands, leaving the public domain still 170,446,484 acres. When the land bill of 1884 was presented there were occupied for pastoral purposes 148,380,005 acres, of which 129,688,006 acres were held under pastoral leases, 16,058,869 under pre-emptive leases, and 2,561,130 under auction leases. The number of pastoral runs was 4,319, of pre-emptive leases 17,635, of auction leases 3,542. The number of conditional purchases up to Sept. 30, 1883, was 132,364. In 1884 there were 121,975, covering 15,416,007 acres, on which the interest and installments had not been discharged, the balance due the Government being £11,562,005.

In 1883 there were 1,320 miles of railway completed, and 597 miles under construction. The earnings were £1,931,464, expenses £1,177,788. Of telegraphs there were 17,272 miles of wire, constructed at a cost of £569,315.

The chief source of revenue, producing more than half the total receipts, has been in recent years the sale and rental of public lands. The sales were partially stopped in 1884 on account of the new land act, which went into force August 6, 1885. Customs duties produce usually about one fourth of the total revenue. The revenue for 1884, including loans, was estimated at £7,466,567, and the expenditure, including outlay on public works, at £7,278,538; the revenue for 1885 at £8,695,929, and the expenditure at £8,420,575. The public debt, incurred mainly for reproductive public works, amounted on Dec. 31, 1884, to £30,132,459. The expenditure on railways and telegraphs amounted at the end of 1882 to £17,654,079.

The new land act is intended to settle small graziers on the land and give them ample time to pay for their farms, but to discourage and prevent the acquisition of large pastoral estates. Out of 17,000,000 acres "free-selected," under the old law, only 3,000,000 are in the hands of *bona fide* occupiers. The remaining 14,000,000 have been the means of enabling the "sheep kings" to filch from the Government the rest of the public domain. By having all the favorable spots that give access to water free-selected by his servants and tools, the squatter became practically the owner of his run, which he could extend to any limit in the same way. By this fraudulent device great estates of tens and hundreds of square miles were acquired in perpetuity under a nominal rent. The new law requires every transaction to pass under the scrutiny of a local land court and be subjected to full publicity. A large portion of the land now occupied by squatters is open for selection under the new act.

Victoria.—The ministry, constituted in 1882, is composed as follows: Premier and Treasurer, James Service; Chief Secretary, Graham Berry; Attorney-General, George Briscoe Kerford; Minister of Mines and Agriculture, Jonas Felix Levien; Solicitor-General and Commissioner of Public Works and Water Supply, Alfred Deakin; Minister of Lands, Albert Lee Tucker; Commissioner of Trade and Customs, George David Langridge; Minister of Railways and of Public Instruction, Duncan Gillies; Minister of Defense, Fredcrick Thomas Sargood; Postmaster-General, James Campbell; without a portfolio, Nathaniel Thornley. The Governor is Sir Henry Brougham Loch, appointed April 10, 1884. The Agent General in London is Robert Murray Smith.

The total population on April 3, 1881, was 862,346, comprising 439,754 males and 409,684 females. The number included 12,128 Chinese and 780 aborigines. The total estimated population on June 30, 1884, was 945,703. The number of marriages in 1883 was 6,771; births, 27,541; deaths, 13,006. At the date of the census of 1881, 499,199 of the inhabitants were born in Victoria, 39,861 in other Australian colonies, 147,453 in England and Wales, 86,733 in Ireland, and 48,153 in Scotland. About one half the population live in towns, 434,467 in 1881. Melbourne, the capital, in 1883 had 304,409 inhabitants.

The total value of imports in 1883 was £17,743,846, of exports £16,398,863. The export of wool was 109,616,710 lbs., valued at £6,054,613. The export of wheat was valued at £674,129. The gold product in 1883 was 810,047 ounces, valued at £3,240,188. It has remained nearly stationary for the past four or five years. The cultivated area in 1884 was 2,215,923 acres. The wheat product was 15,570,245 bushels, averaging 14 to the acre. The number of sheep in 1884 was 10,739,021; of cattle, 1,297,546; of horses, 286,779; of pigs, 233,525. The capital value of manufactories in 1883 was £8,519,486; hands employed, 45,698. The number of miners at work in the gold fields was 31,621, of whom 6,387 were Chinese. The value of rateable property in 1883 was £95,610,959, the annual value £7,692,706.

There were 1,562 miles of railroad completed at the end of 1883, and 130 miles in progress. The total cost was about £22,000,000, or £14,100 per mile. The borrowed capital was £17,621,400, on which the interest was £932,640; the net earnings in 1883 were £816,000, 38·32 per cent. of the gross receipts. There were in the beginning of 1884 3,660 miles of telegraph lines and 7,271 miles of wire.

The revenue for the year ending June 30, 1884, amounted to £5,934,240; the expenditure to £5,786,913. Of the revenue £1,769,107 were derived from customs, £446,347 from internal taxes, £719,312 from land, £2,227,577 from public works, and £216,679 from posts and telegraphs. Therevenue for 1884–'85 was estimated at £5,963,720; the expenditure at £6,257,881. The amount of the public debt, incurred in the construction of public works, was £28,325,112 on June 30, 1884.

A reciprocity treaty with Tasmania was ratified in June, whereby all exclusive products of either colony, and all manufactures that contain materials of foreign manufacture, not to exceed 5 per cent of the value of the finished product, are entered into the other duty-free. The matters dealt with by Parliament in the session that began June 17, 1885, are the amendment of the land titles act and of the lunacy law; a new licensing bill, permitting local option; a measure for the sanitary regulation of workshops and factories; re-apportionment of the electoral districts; improvements in the navigation laws and in the administration of justice; and the important subject of the irrigation of arid districts. An agitation against secular education and "godless schools" was raised among the Roman Catholic and other denominations, but the Ministry ignored the subject for fear of compromising their popularity, either with the majority, who are in favor of the existing public school system, or with the large and excited minority, who desire to sweep it away.

South Australia.—The ministers at the head of the six departments are as follow: Chief Secretary, J. Colton; Attorney-General, C. C. Kingston; Treasurer, W. B. Rounsevell; Commissioner of Crown Lands, J. Coles; Commissioner of Public Works, T. Playford; Minister of Education, R. C. Baker. The Governor is Sir William C. F. Robinson, appointed in November, 1882. The Agent General in Great Britain is Sir Arthur Blyth.

The population in 1881 was 279,865; 149,530 males and 130,335 females. The number of aborigines was 6,346, the number of Chinese 2,734. The population at the end of 1883 was estimated at 304,515. The number of marriages in 1883 was 2,539, of births 11,173, of deaths 4,435, the net immigration 4,268. The population of Adelaide, the capital, exclusive of suburbs, was 38,479 in 1881.

The total value of imports in 1883 was £6,310,055, of exports £4,883, 461. The wool export to Great Britain of 1883 was £2,007,301 in value. The shipments of wheat to Great Britain were of the value of £1,025,077 in 1880, but fell off to £107,619 in 1883. Copper was exported in 1883 to the amount of £219,315. The product of wheat in 1879–'80 was 14,260,964 bushels, and in 1883–'84 14,649,230 bushels. Of the total 2,754,560 acres cultivated in 1883–'84 1,846,151 were under wheat. Of the total area of the colony 903,690 square miles, or 578,361,600 acres, 10,601,000 acres were alienated at the end of 1883. The pastoral leases numbered 1,742 in 1882 and covered 223,092 square miles. The wine product of 1883 was 430,520 gallons. The live stock in 1884 numbered 6,677,067 sheep, 319,620 cattle, and 164,360 horses. Copper-ore was produced in 1883 of the value of £140,545, and copper of the value of £234,780. The valuation of real property in the colony in 1883 was £50,000,000, of personal £20,000,000.

The mileage of railroads completed, Dec. 31, 1883, was 990, begun 225 miles; the length of telegraph lines 5,278, of wires 8,824 miles.

The revenue for the year ending June 30, 1884, was £2,009,484, the expenditure £2,370,242. The public debt, incurred exclusively for railroads, telegraphs, and harbor improvements, amounted to £15,511,000.

Queensland.—The following is the list of ministers: Premier and Colonial Secretary, Samuel Walker Griffith; Colonial Treasurer, James Robert Dickson; Postmaster-General, Charles Stewart Mein; Attorney-General, Arthur Rutledge; Secretary for Public Works, William Miles; Secretary for Public Lands, Charles Boydell Dutton; without portfolios, R. Bingham Sheridan and J. F. Garrick. The Governor is Sir Anthony Musgrave, appointed in April, 1883. The Agent General for Queensland in Great Britain is James Francis Garrick.

The population in 1881 was 213,525, of which number 125,325 were males and 88,200 females. Included were 11,229 Chinese and 6,348 Polynesians. The number of aborgines is estimated at 20,585. The total population on June 30, 1884, was computed to be 301,577. Brisbane, the capital, contained 36,109 inhabitants in 1883. The net immigration in 1883 was 34,371 persons, including 1,837 Chinese and 4,159 Polynesians The number of marriages in 1883 was 2,392, of births 9,890, of deaths 5,041.

The total value of imports in 1883 was £6,233,351, of exports £5,276,608. The export of wool was valued at £2,277,878; of sugar, £539,238; of hides and skins, £155,998. The shipments of gold in 1883 were 193,994 ounces of the value of £698,138. The value of the tin product in that year was £588,012.

About one half the area of the colony, estimated at 668,224 square miles, is covered with forest. More than two thirds is leased by the Government to squatters for pastoral purposes. The 9,243 runs cover 486,763 square miles, or 311,528,320 acres, and yielded in 1883 a rent of £238,057. The acreage of crops in 1883 was 157,243. There were 47,897 acres under sugar-cane. The produce of 26,667 acres was 36,767 tons of sugar valued at £997,029.

At the end of 1883 1,038 miles of railroad were open to traffic and 454 miles in process of construction or authorized. The amount invested by the Government in railroads to that date was £7,431,142. The earnings in 1883 were £548,116 and the working expenses £291,347. The mileage of telegraphs was 6,654, with 10,617 miles of wire.

The movement for the separation of Northern Queensland was started in 1882 and gained momentum as the black labor question became acute. It was not based ostensibly on the principle of perpetuating disguised forms of slavery. The promoters of the scheme asserted that the tropical climate of Queensland north of the twenty-second parallel of latitude rendered the conditions of labor that were adapted for the older portion of the colony impossible; but the labor question they reserved for the action of their own Legislature. Their ostensible grievance was that the Queensland Government does not expend on public works in their part of the colony sums proportionate to the amount it extracts from it in the way of taxes, and that the railroads already authorized for the development of the sugar and mining districts of Northern Queensland are scarcely begun after years of delay. Wealth, profits, and wages are on a larger scale than in the older settlements, and expenditure in proportion; consequently they pay a large share of the customs duties. Representation is proportioned to the population, and as they number only 9,361, they have only 8 members in the Parliament to 47 for the 50,664 inhabitants of the southern section of the colony. If they were a separate colony they would soon build their own railroads and develop much more rapidly the enormous mineral and agricultural resources of their section. The same considerations precisely induced the Imperial Government to separate Moreton Bay, the present Queensland, from New South Wales in 1859.

Western Australia.—The Governor of the colony is Sir Frederick Napier Broome, appointed in December, 1882. The revenue in 1883 was £284,363, the expenditure £240,566. The value of imports in 1883 was £516,846, of exports £447,010. There were 55 miles of railway open to traffic at the end of 1883 and 68 under construction, 1,609 miles of telegraph completed and a line of 750 miles, from Geraldton to the northwest coast, to connect with the ocean cables, in course of construction. Western Australia, retarded in her earlier development by the convicts colonized there, and still relatively backward because the valuable natural resources of the country are not so immediately available as those of other parts of Australia, is making rapid progress under the energetic administration of Sir Napier Broome. A railroad from Freemantle to York, 91 miles, was opened in June, 1885. The governor signed in London, in 1885, a contract for the construction of a railroad, 220 miles long, extending the line that runs from Perth to Beverly to the town of Albany on the south coast. It is on the land-grant system pursued by the United States Government. The company receive 12,000 acres of land for every mile of railroad built. The Government were treating at the same time for another railroad, 200 miles in length, to run from Guildford to Geraldton. Two syndicates contemplated the building of other railroads. Another important public work is the harbor of Freemantle, near Perth, which Sir John Coode is constructing at a cost of £100,000. Sir Napier Broome floated in London a loan of £525,000.

There are several singular features in the social and economical conditions of Western Australia. The German settlers are numerous. North from the capital, among the fertile plains of the interior, a monastery of Spanish Benedictines, called the New Norcia Mission, has been established a long time. The mission rents extensive grazing rights in the Victoria plains from the Government. Among the extremely various natural resources of the colony are valuable pearl-fisheries. The total population of this, the largest of the Australian colonies, with an extent of 975,920 square miles, is only 32,500 souls. The finances of the colony are flourishing. The expenditures are increasing rapidly, and the revenue still more rapidly. There was a surplus of £136,000 at the end of March, 1885.

Tasmania.—The Premier is Adze Douglas; the Governor, Maj.-Gen. Sir G. Cumine Strahan, appointed in August, 1880. The colony of Tasmania has an area of 26,215 square miles. The population is estimated to have increased from 114,762 in 1880 to 130,541 in 1844. The bank deposits increased nearly fourfold in the same period. The total valuation of property increased in ten years from £604,347 to £837,916. The imports in 1883 amounted to £1,832,637, the exports to £1,731,599. Wool was exported of the value of £450,367; tin, £376,446; gold, £173,561; preserved fruit, £96,069; green fruit, £80,155. The Government has sold 4,292,757 acres, and leased 1,902,414 as sheep-runs. The mileage of railroads in 1883 was 167, of telegraph-lines, 1,273, with 1,543 miles of wire.

The revenue in 1883 was £562,189, the expenditure £533,036; the public debt in July, 1884, £2,385,600, raised mainly at 6 per cent for public works.

New Zealand.—The ministry at the beginning of 1885 was composed as follows: Premier and Colonial Treasurer, also Commissioner of Customs, H. A. Atkinson; Minister of Lands and Immigration, William Rolleston; Minister of Native Affairs, John Bryce; Colonial Secretary and Minister of Education, Thomas Dick; Minister of Public Works, E. Mitchelson; Attorney-General and Minister of Justice, E. T. Conolly, Postmaster-General and Commissioner of Telegraphs, R. Oliver. The Governor is Lieut.-Gen. Sir William Francis Drummond Jervois, appointed in Nov. 1882. The Agent General of New Zealand in Great Britain is Sir Francis Dillon Ball.

The population in 1881 was 534,032, including 44,099 Maoris and 5,004 Chinese. The population on Jan. 1, 1884, exclusive of aborigines, was 540,877, comprising 294,665 males and 246,212 females. The number of marriages in 1883 was 3,612; births, 19,202; deaths, 6,061. The net immigration in 1883 was 10,029.

The total value of imports in 1883 was £7,974,038, of exports, £7,095,999. The export of wool was 68,149,430 pounds, valued at £3,014,211. The export of grain, mainly oats and barley, was valued at £1,351,651; skins, mainly sheep and rabbit, £166,132; gum, £336,606; tallow, £233,557; timber, £149,256; frozen meat, £118,328. Of the total imports 65 per cent. came from Great Britain, 19 per cent. from Australia, and 5 per cent. from the United States. Duties on imports yielded £1,414,181.

The gold product in 1883 was 222,899 ounces, value £892,445; the coal product, 421,764 tons.

The area of the colony is 66,777,280 acres. Up to the end of 1883 17,430,021 acres had been sold by the Government, and 11,638,569 acres were rented by the Crown for pastoral purposes. The number of occupied holdings, exclusive of Crown leases, was 30,832, covering 10,309.170 acres of freehold and 4,827,727 acres of leasehold property. Three quarters of the land was farmed in large holdings of from 1,000 to 100,000 acres and over. The acreage under grain in 1884 was 673,567, the product of wheat 9,827,136 bushels, of oats 9,231,339 bushels. The number of sheep in 1884 was 12,985,085, against 13,834,075 in 1883; the number of cattle 698,637, of horses 161,736, of swine 200,083.

There were open to traffic 469 miles of railroads in the North Island and 926 in the South Island, besides 91 miles of private lines, 1,486 miles in all. The outlay of the Government on railroads up to March 31, 1884, was £12,057,972. The rate of profit in 1883 was about 2¾ per cent., which was less than in former years, owing to a lowering of the tariff. The length of telegraph lines on Jan. 1, 1884, was 4,074 miles, with 10,037 miles of wire.

The revenue for 1884–'85 was £3,820,000, the expenditure £3,790,000. The revenue for 1885–'86 is estimated at £4,130,000, the expenditure at £4,100,000. A new loan of £372,375 is to be raised to meet expenses up to 1887. The debt in March, 1884, was £32,367,711.

The Maori Question.—In 1884 certain Maori chiefs visited England and presented to the Government a memorial setting forth that the treaty of Waitangi secured them in their chieftainship, in their lands, their forests, villages, and fisheries, and promised that laws were to be given to them in like manner as they are given to the people of England. This covenant they alleged has been trampled upon by the Colonial Government in numerous particulars enumerated in their memorial. In a separate petition Chief Tawhiao prayed that the proceeding of the colonial land courts with respect to the lands of the Maoris might not be confirmed until the return of the deputation. Lord Derby answered that Her Majesty's Government was unable to interfere with the courts of law. The first memorial he transmitted to the governor, Sir William Jervois. The reply, containing documents bearing on the subject, and the observations of the Colonial Government, was received May 8, 1885. The colonial ministers in their memorandum confined themselves to the period since 1865, when British troops were removed, and when the colony began to manage native affairs without interference. They declared that no infraction of the treaty of Waitangi had taken place within that period. The request that the natives should have a separate legislative body of their own in the North Island they pronounced unreasonable and absurd, since the Maoris were represented by able chiefs in both branches of the Colonial Legislature, and there were no local native affairs that could not be dealt with by their committees. A proposition made by the Aborigines' Protection Society, that the powers of the native land courts should be transferred to an elective body of natives, was declared by the governor to be impracticable and undesirable.

AUSTRIA-HUNGARY, a dual monarchy in Central Europe. Austria and Hungary have each its own Constitution and laws, parliament, ministers, and government. They are united in the person of the sovereign and in having a common army, navy, and diplomacy. Common affairs, which are limited to matters appertaining to foreign relations and war, are legislated upon by a parliamentary body called the Delegations. The Delegations consist of 60 members chosen from the Austrian Reichsrath and 60 from the Hungarian Parliament, 20 from each upper and 40 from each lower house. They deliberate in separate halls, but if their decisions are different they meet simply to take a joint vote.

The Emperor of Austria and King of Hungary is Franz Josef I, born Aug. 18, 1830, successor to his uncle, Ferdinand I, and proclaimed Emperor upon the abdication of the latter, Dec. 2, 1848; crowned King of Hungary after the restoration of the Hungarian Constitution, June 8, 1867. The heir-apparent is the Archduke Rudolf, born in 1858, only son of the Emperor.

The Minister of Foreign Affairs and of the Imperial House for the whole Empire is Count G. Kalnoky de Köröspatak, appointed Nov. 21, 1881; the Minister of War, Lieut. Field-Marshal Count Bylandt-Rheydt, appointed June 21, 1876; the Minister of Finance, Baron von Kallay, appointed June 4, 1882.

Area and Population.—The Austrian Empire has an area of 240,942 square miles and a population of 37,883,226, as returned in the census of Dec. 31, 1880. The area of Austria proper is 115,903 square miles, that of the Hungarian monarchy 125,039. The population of Austria in 1880 was 22,144,244, against 20,374,974 in 1869; that of Hungary, 15,642,102, against 15,509,415. In Austria there were 10.819,737 males and 11,324,507 females; in Hungary 7,702,810 males and 7,939,192 females. The independent principality of Liechtenstein, in Tyrol, has an area of 68 square miles and a population of 9,124 souls. The official estimate of the population of Austria on Dec. 31, 1884, makes the total 22,864,106, of whom 11,170,468 were males and 11,693,638 females. The number of men serving in the army and navy was 162,423.

The Turkish provinces of Bosnia and Herzegovina and the Sanjak of Novi-Bazar, occupied and administered by Austria-Hungary since 1878, have a total extent of 24,247 square miles, and contained in 1879 1,326,453 inhabitants. The population of the occupied provinces included 448,613 Mohammedans, 496,761 Greek-Orthodox, 209,391 Roman Catholics, and 3,439 Jews. Within two years a large portion of the Mohammedan population has emigrated.

The population of Austria was divided in respect to nationality, according to the language returns, as follows: German, 8,008,864; Bohemian, Moravian, and Slovak, 5,180,908; Polish, 3,238,534; Ruthenian, 2,792,677; Slovene, 1,140,304; Servian and Croatian, 563,615; Latin, 668,653; Roumanian, 190,799; Magyar, 9,887. The returns of languages spoken in Hungary show the following ethnical division: Magyar, 6,206,872; Roumanian, 2,325,838; Servian and Croatian, 2,325,747; German, 1,882,371; Bohemian, Moravian, and Slovak, 1,799,563; Ruthenian, 345,187; Wendic, 83,150; Gypsies, 79,393; Armenian, 3,523; other native tongues, 33,668; foreign tongues, 56,892; infants, 499,898.

The following percentages of the population followed the various creeds in 1880:

CREED.	Austria.	Hungary.	Austria-Hungary.
Roman Catholic	79·9	50·0	67·6
Greek and Armenian Catholic	11·5	9·7	10·6
Protestant, etc.	1·8	20·6	9·6
Byzantine Greek	2·3	15·6	7·9
Jewish	4·5	4·1	4·3
Total	100	100	100

In 1880, 32·59 per cent. of the males and 36·08 per cent. of the females of school age and over in Austria could not read nor write; in Hungary, 44 per cent. of the men and 53·5 per cent. of the women.

The number of marriages in Austria in 1883 was 176,016; of births, 882,654; of deaths, 701,199; excess of births, 181,455; the number of marriages in Hungary in 1882 was 163,839; of births, 708,011; of deaths, 571,814; excess of births over deaths, 136,157. Of the total number of births in Austria, 14·5 per cent. were illegitimate, and in Hungary, 8·3 per cent. The emigration from Austria in 1880 was 10,145; from Hungary, 11,000.

The population of the largest cities in 1880 was as follows: Vienna, including suburbs, 1,103,857; Buda-Pesth, 360,551; Prague, 162,323; Trieste, 144,844; Lemberg, 109,726; Grätz, 97,791; Brunn, 82,660; Szegedin, 73,675; Cracow. 66,095.

Of the total population of Austria, 2,275,117 were returned as engaged in agriculture on their own lands, 90,036 on rented land, and 3,739,421 as farm-laborers; 1,305 as mine-owners and 116,565 as mining operatives; 575,811 as manufacturers and 1,541,287 as operatives; and 185,405 as merchants, with 124,668 employés. In Hungary the farm-owning agricultural class numbered 1,451,707, the tenant farmers 23,393, the laborers 1,373,768; the mining proprietors 173, employing 25,732 miners; the manufacturers 380,786, with 385,630 workers; the traders 97,300, with 79,995 assistants.

Commerce and Industry.—The Austro-Hungarian customs union, which expires in 1886, includes since 1880 all the lands of the empire and the occupied provinces of Turkey, but not the cities of Trieste and Fiume, which are left free ports. The total value of merchandise imports in 1882 was 654,173,740 florins (1 florin = 45·3 cents), the total value of exports 78,189,277 florins, the former having increased from 52,100,000 and the latter from 65,470,251 florins in 1878.

The total exports in 1883 were valued at 749,920,510 florins, of which 457,410,860 florins were shipped by land across the German frontier, 56,160,410 florins across the Italian, 48,757,060 across the Roumanian, 28,318,910 across the Russian, 17,229,920 across the Servian, 5,992,790 across the Swiss, 262,280 across the Turkish, and 8,440 across the Montenegrin frontiers; 97,424,420 florins by sea through Trieste, and 38,355,380 through Fiume and other ports. The values of the chief exports in 1883 were as follow:

Articles.	Florins.
Cereals	120,778,700
Textiles and textile materials	111,033,700
Animals and animal produce	97,038,030
Fuel	77,959,020
Sugar	70,173,950
Hardware	41,776,120
Glass and crockery	27,973,020
Wines and liquor	26,205,640
Fruits, plants, and roots	23,879,940
Leather and leather manufactures	21,212,410
Wood manufactures	17,609,620
Iron and iron manufactures	11,757,990

The value of the specie export of 1883 was 4,154,080 florins.

The special trade of Hungary in 1883 was divided as follows: Imports from Austria, 186,000,000 florins, in round numbers; from other countries, 64,000,000 florins; exports to Austria, 220,000,000 florins; to other countries, 135,440,000 florins. Of the imports 35 per cent. consisted of textiles, 7·69 per cent. of cattle, etc., 5·96 of iron and manufactures thereof, and the remainder of grain and rice, machinery, and leather goods. Of the exports 39·66 per cent. consisted of grain and flour, 12·67 of animals, 6·63 per cent. of wine and spirits, and 5·31 per cent. of wool and woolens. The general commerce of 1884 amounted to 484,439,887 florins of imports, and 393,694,494 florins of exports, showing a decline in the latter of nearly forty millions, chiefly in the classes of cereals, vegetables, and wine.

The value of the mining products of Austria in 1882 was returned as 69,835,480 florins—the largest product being coal and lignite, the next in value salt, and next silver, iron, and lead ores. The furnace products, not included in the above, were valued at 28,908,070 florins. The total value of manufactured products in Austria is estimated for 1880 at more than 1,000,000,000 florins. The product of mines and reducing works in Hungary is valued for 1882 at 19,918,460 florins, not including salt, of the value of 12,599,110 florins.

Heavy duties were laid on petroleum for the benefit of the Galician oil-wells and the encouragement of refining. The oil-springs have not heretofore proved productive, but large refineries, using Russian crude oil, were established at Trieste, and the import of American oil rapidly declined. In the first half of 1885 more than half of the imports of petroleum came from the Caucasus. The borings at Kolomea, in Galicia, in progress for several years, finally opened up in 1885 a number of wells with an abundant flow of petroleum.

Agriculture.—No less than 94 per cent. of the total area of Austria-Hungary is productive. The area under cultivation in Austria is 46,108,070 acres, woods 23,280,412 acres, meadow and pasture 11,310,533 acres. The acreage and produce of the principal crops in 1883 were as follow:

CROPS.	Acres.	Product.
Grain	16,683,201	278,315,273 bush.
Potatoes	2,578,255	280,550,627 bush.
Beet-sugar	560,623	82,440,600 cwts.
Wine	515,576	76,430,310 gals.
Hay	9,826,377	190,629,127 cwts.

The valuation of landed property in 1880 was 7,721,349,000 florins; the value of the annual production was estimated at 1,756,442,430 florins. The number of horses in 1880 was 1,463,280, cattle 8,584,077, sheep 3,841,340, swine 2,721,541, goats 1,006,675.

The productive area in Hungary is 76,500,000 acres, of which 21,500,000 were cultivated, 22,514,450 under forest, and the rest under grass and pasture. The agricultural returns for 1883 are as follow:

CROPS.	Acres.	Product.
Grain	19,133,618	307,714,079 bush.
Potatoes	972,958	85,024,079 bush.
Beet-sugar	190,054	34,848,063 cwt.
Wine	899,754	101,994,970 gals.
Tobacco	147,605	1,088,856 cwt.
Flax and hemp	196,786	924,113 cwt.

The animal census of 1880 gives the number of horses as 1,819,508, cattle 4,597,543, sheep 9,252,123, goats 236,352. The Hungarian wheat-crop in 1885 was 17 per cent. better than the average, and with a smaller acreage the product was greater than that of 1884.

Railroads.—The state lines of Austria in the beginning of 1884 had a total length of 655 miles, private lines leased to the state 1,352 miles, and private lines worked by companies 5,628 miles, total 7,635 miles; state lines in Hungary 1,983 miles, private lines worked by the state 139 miles, by companies 3,063 miles, total 5,185 miles; total receipts in 1883, 243,-

366,940 florins. A short line connecting Mostar, the capital of Herzegovina, with the small port of Emetkovic, on the Dalmatian coast, was opened June 13, 1885. Mostar is to be connected with the Austrian system by a line to Serajevo as soon as a parliamentary credit is granted.

The question of nationalization of the Great Northern Railroad was decided by the Reichsrath, in the spring, in the negative. The charter of the company was prolonged upon conditions arranged with the Government, in accordance with which the company reduced the tariffs 25 or 30 per cent., and engaged to invest 40,000,000 florins a year in extending its lines.

Telegraphs.—In 1883 there were 32,684 miles of telegraph lines in Austria, with 59,732 miles of wire; number of messages 6,559,313, receipts 4,053,360 florins, expenses 3,646,400 florins. The length of the Hungarian lines in 1882 was 9,894 miles, of wire 35,456 miles; the number of messages 3,415,640; receipts 1,609,770, expenses 1,729,360 florins. In Bosnia and Herzegovina there were in 1882 1,560 miles of telegraph-line, and the number of messages was 373,352.

The Post-Office.—The Austrian post-office in 1882 forwarded 312,470,050 letters and postal-cards, 44,987,650 circulars, etc., 80,573,400 newspapers, and 32,077,500 packages; the Hungarian post-office, 98,188,000 letters and cards, 13,700,000 circulars, etc., and 41,310,500 packages. The post-office receipts in Austria were 19,150,650 florins, while the expenses were 15,886,360 florins; the receipts in Hungary were 7,360,080 florins, and the expenses 5,744,140 florins.

Navigation. — The Austro-Hungarian merchant marine in 1884 comprised 66 ocean-steamers, of 67,562 tons, 68 coasting-steamers, of 10,717 tons, and 9,040 sailing-vessels, including coasters and fishing-smacks, of 243,123 tons, employing collectively 28,971 seamen. The Austrian trade with the East is carried on in the Austro-Hungarian Lloyd line of steamers, subsidized by the Imperial Government at the rate of 1,730,000 florins per annum. This company had in 1884 a fleet of 84 vessels, of 69,818 tons. The tonnage entered at Austrian ports in 1882 was 6,774,677; cleared, 6,784,896. The tonnage under the Austrian flag was 87 per cent. of the total.

The Army.—Military service is universal and obligatory. The annual recruit is 94,000 men. The active army and its reserve are under the direction of the common Minister of War, the Landwehr of the two monarchies under the control of Austrian and Hungarian Ministers of Defense in times of peace. The Austrian military system has, with some modification, been enforced in Bosnia and Herzegovina. The period of service is three years with the colors, beginning with the twenty-first year, seven in the reserve, and two in the Landwehr. The effective in 1883 was as follows:

DESCRIPTION OF TROOPS.	Peace footing.	War footing.
102 regiments of infantry	144,738	490,620
1 regiment of Tyrolean Jägers	3,848	12,118
32 battalions of Jägers	12,288	38,496
41 regiments of cavalry	42,271	61,582
13 regiments of field-artillery	20,083	58,474
12 battalions fortress-artillery	7,038	18,431
2 engineer regiments	5,019	13.800
1 regiment of pioneers	2,629	7,092
1 railway-and-telegraph regiment	844	4,652
Train	2,355	36,300
Staff, medical, and other establishments	14,021	32,541
Total standing army	255,084	774,106
Austrian Landwehr	3,522	132,032
Hungarian Landwehr	7,540	127,234
Gendarmerie, etc	6,254	6,164
Total	272,400	1,039,536

On the peace footing there are 18,678 officers, and in war 32,763; in peace, 52,176 horses; in war, 205,316.

The Navy.—The naval forces in 1884 consisted of 13 ironclads, 11 cruisers, 15 coast-guards, 5 transports, 22 torpedo-boats, including 4 of the first class, and a number of school-ships, etc. The largest ironclad is the Tegethoff, with 14½-inch armor, and carrying 6 27-ton guns. The cruiser Custozza has 9-inch plates and 8 22-ton guns. In course of construction is the Kronprinz Erzherzog Rudolf, of the Tegethoff class, with 16-inch steel plates and a speed of 16 or 17 knots; also, two torpedo cruisers of novel construction and high speed. The navy, in time of peace, has 6,890 sailors.

Finances.—The common expenditures of the empire are borne by Austria and Hungary in the proportion of 68·6 per cent. by the former and 31·4 per cent. by the latter. The surplus from customs is applicable to common expenditures, and the excess over these and other receipts, estimated in the budget for 1885 at 97,862,860 florins, is assessed on the two monarchies. The total budget for that year is 119,453,510 florins, of which 4,380,700 florins are assigned to the Ministry of Foreign Affairs, 102,235,135 florins to the Ministry of War for the army, and 10,738,589 for the navy, 1,972,570 florins to the Ministry of Finance, and 126,516 florins to the Board of Control.

The expenses of the administration of the occupied provinces in 1885 are estimated at 7,892,630 florins, of which 6,360,000 florins are the cost of the army of occupation.

Meetings of the Emperors.—The Czar of Russia met the Emperor Franz Josef at Kremsier, in Moravia, on August 25. The conference was attended with elaborate ceremonial, military display, profuse luxury, and various pageants. Extraordinary precautions were taken to guard the life of the Czar, as on the occasion of the meeting of the three Emperors at Skiernievice, the year before. The whole route from Hullein was lined with troops, and all the stations through which the Czar passed were closed to the public. The absence of the German Emperor from the present conference was a subject of comment. Though the beginning of the conference was reported to have been formal to a marked degree, a more cordial manner was noticed after an interview between Count Kalnoky and M. de Giers. A motive for a *rapprochement* was surmised to exist in the critical relations between England and Russia. If the war that was with difficulty avoided a few months before should yet ensue, the localization of the conflict in Asia would lie within the objects of the league of peace. Yet, even if Germany adhered to such a policy, Austria might be tempted to seek to cripple her rival in eastern Europe, and to form new combinations that would further her plans at the cost of Russia. If Austria and Germany have agreed to exert pressure upon the Porte to maintain neutrality and keep the Dardanelles closed in the event of an Anglo-Russian war, then Russia has a motive for promising to give room to Austrian expansion in the direction of the Ægean, to cease crossing the aims of Austrian policy in the Balkans, and to abate her pretensions to be the protector of all the Slavic peoples—a theory that has aggravated internal troubles as among the Ruthenians, the Czechs, and other Slav nationalities, of Austria, and even in Prussia, lately, among the Wends of Silesia, besides creating external difficulties in the path of Austrian development.

Shortly before the meeting at Kremsier the Austrian and German Emperors came together, according to their annual custom, at Gastein, on August 9, amid courtly and popular festivities. Their meeting was followed by a conference at Varzin between Count Kalnoky and Prince Bismarck, who communicated with the Austrian and Russian Chancellors at their subsequent conference in Kremsier.

Mr. Keiley.—Mr. Keiley, whose appointment as American Minister to Italy was canceled on account of the objections of the Italian Government, was accredited as Minister to Vienna. The Austrian Government likewise intimated that it would prefer not to receive him, partly on account of his ultramontane views that were offensive to a friendly government. As this ground was not satisfactory to an influential circle in Austria, and touched upon a delicate question which all desired to leave at rest, another reason of opposite import was found in the laxity of his Catholicism that had permitted him to marry a lady of Jewish race who was not a Catholic. Secretary Bayard addressed a note to the Austrian Government, in which he commented on the unreasonableness of race or religious distinctions, and, intimating that a temporary cessation of diplomatic intercourse would be no calamity, he let the appointment stand. The European press showed no sympathy with the American view, and commended the usage among the governments of Europe of first ascertaining whether a proposed diplomatic representative is a *persona grata* before making the formal nomination.

Tariff War with Germany.—The protective policy of Prince Bismarck took a direction so directly antagonistic to Austrian productive interests in 1885 that severe reprisals were contemplated. His anti-Austrian policy was initiated some time before by closing Germany to Austro-Hungarian cattle, a measure that was followed by a war of railroad tariffs. In 1885 the "sound egotism" of his commercial policy carried him to the point of imposing a sur-tax of three marks per one hundred kilos on cereals, and raising the timber duties. At a conference of the Austrian and Hungarian Ministers in February, it was decided to raise the grain, flour, and malt duties to the rates contemplated in Germany, and also to increase the duties on woolen fabrics and a great number of other industrial products. By the subsequent decision of the legislatnre, retaliatory measures were given up for the present. The object of the tariff war inaugurated by Germany was to extort concessions from Austria for the benefit of German industry. The Hungarians desired either an abatement of the tariff on German manufactures or heavy duties on grain and cattle that would shut out the products of Roumania and other countries and render the Austrians as dependent on them for their food-supply as they were dependent on Austrian industry. Hungarian statesmen proposed a customs union with Germany, a scheme which the German Chancellor is suspected of harboring. Since the immediate harmony of the industrial and agricultural interests of the two empires could not be expected, the plan was suggested of maintaining lesser protective rates between one another and a high common tariff against the world outside.

Austria.—The legislative powers in Austria, or Cisleithania, are divided between the Central Diet or Reichsrath and the 17 Provincial Diets representing the separate states composing the monarchy. The upper house of the Reichsrath is composed of 13 princes of the blood royal, 53 territorial nobles, 10 archbishops and 7 prince-bishops, and 105 life-members appointed by the Emperor. The lower house is composed of 85 deputies representing landed proprietors, 116 representing towns, 21 representing chambers of trade, and 131 representing rural communes. The deputies are elected for six years. If the house is dissolved, new elections must take place within six months. All laws relating to recruiting and military service must have the consent of the Reichsrath; all laws relating to trade and commerce, customs, banking, posts, telegraphs, and railroads require its co-operation; and estimates of revenue and expenditure, bills relating to taxation, loans, and conversion of the public debt, and the general control of the debt, must be subjected to its examination. Either house can initiate legislation. All laws must pass both houses, and receive the approval of the head of the state.

The Cabinet of Ministers is composed as follows: Premier and Minister of the Interior, Count Eduard Taafe, appointed Aug. 19, 1879; Minister of Education and Ecclesiastical Affairs, Baron S. Conrad d'Eybesfeld, appointed Feb. 17, 1880; Minister of Finance, Dr. J. Dunajewski, appointed June 26, 1880; Minister of Agriculture, Count Julius Falkenhayn, appointed Aug. 9, 1879; Minister of Commerce and National Economy, Baron F. Pino von Friedenthal, appointed Jan. 14, 1881; Minister of National Defense, Maj.-Gen. Count S. von Welsersheimb, appointed June 25, 1880; Minister of Justice, A. Prazak, appointed Jan. 14, 1881; without portfolio, F. Ziemialkowski, appointed Aug. 12, 1879.

Finances.—The estimate of revenue for the year ending March 31, 1885, is 474,555,699 florins, of which 95,262,000 florins are derived from direct taxes on land, houses, industries, and incomes; 250,946,800 florins from excise and customs duties, tobacco and salt monopolies, stamps, the state lottery, and other indirect taxes; 26,005,000 florins from posts and telegraphs; 17,385,450 florins from railways; and the remainder from mines, forests, and other ordinary sources of revenue, except 16,458,681 florins of extraordinary receipts. The ordinary expenditures are estimated at 440,581,960 florins and the extraordinary expenditures at 74,337,413 florins. The ordinary expenditures include 118,044,051 florins on account of the public debt, 100,360,790 florins for the Ministry of Finance, 33,817,835 florins as the Cisleithan quota of common expenditures, 41,420,110 florins for the Ministry of Commerce, 19,806,300 for the Ministry of Justice, 16,679,250 florins for pensions and dotations, 16,097,005 florins for the Ministry of the Interior, 11,103,710 florins for the Ministry of Agriculture, 10,934,726 florins for education, 9,115,200 florins for the Ministry of National Defense, 4,650.000 florins for the Imperial Household, 4,253,870 florins for Public Worship, and smaller sums for central establishments, management of the debt, etc.

The general debt of the empire amounted on July 1, 1884, to 2,683,944,438 florins of consolidated funds, 88,318,027 florins of floating liabilities, and 13,917,407 florins of capitalized annuities. The interest charge in 1884 was 115,003,860 florins, of which Austria bore all but about 30,000,000 florins. Austria owes besides a consolidated debt of 530,191,416 florins, a floating debt of 1,513,264 florins, and 142,116,953 florins of land-redemption annuities. The paper currency in forced circulation amounted to 350,951,770 florins besides. The interest on the general and special debts amounted in 1884 to about 114,670,000 florins.

The Dissolution of the Reichsrath.—The Reichsrath closed the sixth and final year of its sessions in April. Count Taafe was called to office in 1879, during the crisis that followed the downfall of the German Liberal Cabinet of Prince Auersperg. With the aid of the personal interposition of the Emperor, the Czechs were induced to cease their abstention from the Reichsrath. A compromise was effected with the Bohemian land-owners, by which the Czech representation was increased. A combination of Czechs, Poles, and German Clericals gave the ministry a majority, in which the moderate section of the German party united. The Cabinet was composed of Slavs and Germans in about equal numbers. The moral effect of the Slav success and certain changes in the electoral laws gave the Czechs a majority in the Bohemian Diet, a result that exasperated the Germans. The German Liberals left the Cabinet, and the two factions of the party joined to oppose the Government as the United Left. The Cabinet remained a coalition ministry only in name, but the Slav tendencies were restrained and moderated by the skillful management of the Prime Minister. The late Reichsrath was composed of 145 German Liberals, 54 Czechs, 57 Poles, and 57 other Slavs and German Clericals. The extravagant demands of the Poles for public works in Galicia nearly broke up the ministerial majority by driving the Clericals over to the Opposition. The ministry passed a liberal electoral law, extending the town and county franchise to all persons paying 5 florins in direct taxes, instead of 10 florins, as formerly. This was counterbalanced by a retrograde education act, lowering the standard of public education, that was passed at the instance of the German Clericals. Toward the end of its period the Reichsrath passed for the Czechs two acts that excited the jealousy and hostility of the Germans more than all others, and inflamed race passions on both sides. These measures were a compromise that failed to satisfy the desires of the Czechs, but they are sufficient to encourage their aspirations to form a separate state with its own Parliament and ministry, and to see the Emperor crowned King of Bohemia at Prague. The more important of these two acts decrees that the Czech tongue shall be, equally with German, the official language of Bohemia. The other creates a Czech University, besides the German University existing at Prague.

The General Election.—The result of the elections for the new Reichsrath that were held in June gave the Taafe ministry a somewhat larger and more solid majority, but failed to secure the two thirds that the Germans feared, which would enable a revision of the Constitution to be carried through against their votes. The German Liberals lost about 20 seats. In Bohemia they lost 11. In Vienna, which they have always carried without opposition, they were defeated in four out of the nine wards, through the votes of the new electors, the "five-gulden men," who returned Democrats and Anti-Semites in their stead. The Democrats are extreme Liberals who are antagonistic to the German Liberals on the question of favoring the aspirations of the Slav nationalities. The 25 National Germans returned from Bohemia and Styria, on the other hand, go too far in their demands for German supremacy in the monarchy for the German Liberals to act with them. The proper strength of the latter is thus reduced to 105 votes. The Ruthenian agitation in Galicia failed to secure more than a single seat. In Carinthia and Croatia the Slovenes wrested several seats from the German party. The Polish representation, including two doubtful Ruthenians, numbers 62.

Czech Agitation.—The exasperation shown by the Germans at the triumph of Czech ideas provoked the Czechs to demonstrations as angry as those that took place during the heat of the struggle for the recognition of their national language. The American Government was drawn into an inconvenient position in connection with this internal Austrian question. Mr. Phelps, the former American consul at Prague, was obnoxious to the Czechs on account of his supposed German sympathies, and when a report was transmitted to the State Department at Washington by Consul-General Weaver in Vienna, which criticised the extravagant national aspirations of the Czechs, he was credited with its authorship. His recall by President Cleveland was gratifying to the numerous citizens of the United States of Bohemian birth. The appointment as his successor of Mr. Carl Jonas pleased them still more. He formerly edited a Czech newspaper in Racine, Wis., in which he advocated the extreme Bohemian state-rights doctrine and showed Panslavistic leanings and hostile feelings toward Austria. On this account the Austrian Foreign Office declined to issue his exequatur.

The visit of an American deputation of 153 Czechs to attend a performance in the new National Theatre at Prague was the occasion of noisy demonstrations on June 15. An assault was committed, August 24, on a party of Germans who assisted at the dedication of a gymnasium at Königinhof. In the autumn manœuvres at Pilsen, in Bohemia, quarrels occurred between German and Czech soldiers, and a riot broke out in camp.

Labor Troubles.—In May four men were sentenced to long terms of imprisonment, after a trial without a jury, under the new law, for an anarchist conspiracy in Wiener Neustadt. In Prague twenty-four Socialist miners were tried by jury and most of them convicted of lesser offenses. Subsequently a store of dynamite and apparatus was discovered in the wood where they met. The arrest of two Socialists caused a serious riot at Trebitsch, in Moravia, on July 13.

A serious labor riot occurred at Brünn, June 16. Some of the work-people claimed that the new law fixing the working-day at eleven hours includes the pauses for meals within those eleven hours, or at all events the half-hour for the afternoon meal. The burgomaster, when appealed to, decided against them, but they went on strike, stoned the lights in the factories where work was continued, were joined the next day by the rest of the operatives, and fought with the military. The workmen subsequently demanded a ten-hour working-day; and, after causing much agitation throughout Austria, accepted as a compromise ten hours for half the week. Fifty-three workmen were arrested for taking part in the riots, on thirty-four of whom heavy sentences were inflicted, and on the remainder light punishments.

The enforcement of the new law against Sunday labor affected many interests injuriously. A number of trades were exempted for the public convenience, but the newspapers were obliged to discontinue Monday editions, and Jews were denied the exemption claimed on the ground of having another holy day.

The Jauner-Kuffler Frauds. — A commercial scandal in Vienna excited great interest when it transpired and during the trial of the participants, which took place in September. The most important of the swindlers, Lucas Jauner, committed suicide when detected. He was a director in the South Austrian Escompte Company and manager of the bank. He was persuaded by Kuffler, a Jewish speculator, to advance funds of the company for the latter's speculations, nearly 2,000,000 florins. That amount was sunk by Kuffler, who handled 14,000,000 florins of the company's funds between 1882 and 1885. Amtschler, a clerk in the employ of the corporation, was implicated and charged with making false entries. Kuffler bought up bad notes and had them discounted by Jauner, and before they fell due borrowed money from the bank to buy them back. When the bank accounts were audited he supplied securities and money to cover up the losses. Kuffler speculated rashly in sugar, and lent money to Bohemian sugar-refiners, notably the firms of Weinrich and Tschinkel, that afterward failed. His operations were on an enormous scale. He was convicted, and sentenced to seven years' penal servitude, while Amtschler was acquitted.

Hungary.—The legislative authority resides in a Diet composed of two chambers, the House of Magnates and the House of Representatives. The former was composed in 1884 of 2 princes of the blood, 50 archbishops and other dignitaries of the Roman and Greek churches, 692 peers and dignitaries, 5 regalists of Transylvania, and 2 deputies from Croatia. By the law of 1885 the composition of the house was greatly altered. Out of the 251 noble families in Hungary, 206 held seats in the old House of Magnates. In the reformed Chamber the 3,000-florin qualification clause reduces this number to 91, but among these there are 21 families represented by from 3 to 16 members each and several others by 2 members. The total number of hereditary seats is reduced to 200. The new class of life-peers numbers 30, who were selected partly from the ranks of science, art, industry, and commerce, and partly from political and official circles. Out of the class of magnates by birth are retained, besides those qualified by paying land-taxes of 3,000 florins or above, 50 others who are elected once for all. The Catholic prelates and the heads of Protestant religious bodies have seats in the reformed upper house. The old house numbered 900 members, two thirds being nobles of small property; but in the reformed Chamber of Magnates the hereditary principle is attached to the great landed estates.

The House of Representatives is elected by direct suffrage, limited by a small tax-paying qualification, from which certain educated classes are relieved. Members are elected for three years. The house consists of 337 Hungarian deputies, 75 Transylvanian, 34 delegates from Croatia and Slavonia, and 1 from Fiume.

The Council of Ministers is composed as follows: President, Coloman Tisza de Boros-Yeno, appointed Feb. 25, 1875; Minister of Finance, Count G. Szapary, appointed Dec. 6, 1878; Minister of National Defense, Baron Bela d'Orczy, appointed Dec. 26, 1883; Minister near the King's person, Baron Bela d'Orczy, appointed Aug. 12, 1879; Minister of the Interior, Coloman Tisza de Boros-Yeno, appointed Dec. 6, 1875; Minister of Education and Public Worship, August de Trefort, appointed Feb. 26, 1877; Minister of Justice, Dr. Theodor Pauler, appointed Dec. 6, 1878; Minister of Communications and Public Works, Baron de Kemeny, appointed Oct. 14, 1882; Minister of Agriculture, Industry, and Commerce, Count Szechenyi, appointed Oct. 14, 1882; Minister for Croatia and Slavonia, Count de Bedekovich, appointed Feb. 26, 1877.

Finances.—The revenue in 1884 was 310,858,230 florins, including 6,800.000 florins advanced on a loan, and the expenditures 318,605,680 florins. The budget estimates for 1885 give the total receipts as 326,317,695 florins, including 12,492,678 florins of transitory revenue. The total expenditures are estimated at 337,993,528 florins, including transitory expenditures amounting to 2,000,577 florins, investments to the amount of 23,020,876 florins, and 4,195,805 florins of extraordinary common expenditure. The principal heads of ordinary expenditure are 105,547,947 florins for the national debts, 56,310,867 florins for financial administration, 28,530,079 florins as the Hungarian quota of common expenditure, 23,771,260 florins for state railways, 14,726,233 florins on account of the Ministry of Communications, and 18,757,869 florins on debts of guaranteed railways, 10,168,429 florins for the Ministry of the Interior, 10,918,688 florins for the Ministry of Justice, 7,447,151 florins for National Defense, 6,011,408 florins for the administration of Croatia, 5.515,231 florins for Public Worship, and the civil list of 4,650,000 florins. About one fourth of the revenue is derived from direct taxes, the house-tax in 1885 being estimated at 8,900,000 florins, the land-tax at 38,000,000 florins, and the tax on profits, incomes, etc., at 25,540,000 florins. About one third of the revenue comes from indirect taxes and monopolies.

The special public debt of Hungary, which has grown up chiefly from the large and increasing annual deficits, amounted in 1884 to 1,273,350,000 florins. The value of the public property was estimated in 1883 at 1,316,100,000 florins.

Hungarian Exhibition.—A National Hungarian Exhibition was opened at Buda-Pesth on May 2. The exhibits were not confined to Hungarian products. Most of the machinery was American and English, exhibited by firms having patents in Hungary. Vienna furniture, Parisian jewelry, and Bohemian glassware were displayed, and a special pavilion was devoted to Roumanian and Servian products. The specially Hungarian exhibits show the considerable development that the young industries of the monarchy have made since the date of political independence, before which pipes, swords, and saddlery about completed the list of Hungarian manufactures. There was a promising assortment of woolen cloths, linens, hosiery, hardware, leather manufactures, furs, furniture, perfumery, artificial flowers, canned meats and preserves, and pottery and majolica of strikingly original and artistic designs, besides vehicles, harness, and saddlery in the ornate national taste.

B

BAPTISTS. I. Regular Baptists in America.—The following is a summary of the statistics of the regular Baptist churches in the United States, as they are given in the "American Baptist Year-Book" for 1885: Number of associations, 1,178; of ordained ministers, 16,678; of churches, 28,599; of members of churches, 2,507,753; increase by baptism during the year, 135,740; number of Sunday-schools, 10.994, with 82,247 officers and teachers, and 792,780 pupils. Value of church property, $26,685,959. Amount of contributions, so far as reported: for salaries and expenses, $4,702,382; for missions, $661,166; for education, $104,158; miscellaneous contributions, $1,292,166; making an aggregate of $6,579,872. The statistics of the educational institutions show 7 theological institutions, with 48 instructors and 467 students; 29 universities and colleges, with 286 instructors and 4,358 students; 60 academies and seminaries, with 463 teachers and 6.960 pupils; and 15 institutions for the colored race and Indians, with 111 instructors and 2,292 pupils; in all, 111 institutions, with 908 instructors and 14,077 pupils. The total value of the grounds and buildings of these institutions is $8,170,449; and the amount of their endowment funds, so far as they are reported, is $7,896,525.

Including the United States, British America, Mexico, and the West Indies, the Baptists have in North America 1,202 associations, 29,521 churches, 17,226 ordained ministers, and 2,607,899 members, with 135,890 baptisms during the year. In Brazil, they have 3 churches, 3 ordained ministers, and 70 members, with 20 baptisms reported; in Europe, 66 associations, 3,279 churches, 6,037 ordained ministers, 366,691 members, and 3,773 baptisms; in Asia, 5 associations, 765 churches, 486 ordained ministers, 66,165 members, and 4,734 baptisms; in Africa, 2 associations, 94 churches, 56 ordained ministers, 7,251 members, and 50 baptisms; in Australia, 5 associations, 138 churches, 91 ordained ministers, and 11,589 members; in all, 1,280 associations, 33,800 churches, 23,889 ordained ministers, 3,059,635 members, and, so far as reports are given, 144,467 baptisms during the year.

Publication Society.—The sixty-first anniversary of the American Baptist Publication Society was held at Saratoga Springs, N. Y., May 29, 30, and 31. Mr. Edward Goodman presided. The receipts of the society for the year have been: in the business department, $400,277; in the missionary department, $108,358; and in the Bible department, $18,241; in all, $526,876, or $56,080 less than the receipts of the previous year. Sixty-seven new titles had been added to the catalogue of publications. Eighty-six missionaries had been employed in connection with the missionary department, under the superintendence of which, also, 127 colored ministers and students for the ministry and 98 Sunday-schools had been furnished with libraries, besides other aid given to ministers and Sunday-schools; 50 churches and 462 Sunday-schools had been organized; and 498 Sunday-school institutes had been held. Reports were also made in connection with this department from the German Baptist Publication Society in Germany, and the Swedish Baptist Publication and Tract Society in Stockholm; of the organization of a Baptist mission, with a school of 47 pupils, at Erzeroum, in Armenia; and of publications in the Armenian and Turkish languages. The Bible department reported concerning its work in distributing the Scriptures, by sales and grants, in the various States and Territories, and several foreign countries.

Home Mission Society.—The fifty-third annual meeting of the American Baptist Home Mission Society was held at Saratoga Springs, N. Y., May 27. Mr. John B. Trevor presided. The Executive Board reported that the receipts for the year, including conditional or annuity funds, had been $447,379, and the expenditures $353,126. The debt had increased from $54,331 to $117,988. Seven hundred and two missionary laborers had been employed in the United States, Canada, and Mexico, under whose auspices 139 churches had been organized, 3,317 persons baptized, and 740 Sunday-schools, having 48,802 attendants, sustained. Aid had been given, with $29,799 of gifts and $27,255 of loans, to 113 churches; and additional sittings had been provided for 31,138 persons. Fifteen institutions for the education of teachers and preachers had been sustained among the freedmen of the South, together with a university in the Indian Territory, and an "International School" at Monterey, Mexico. Eleven of these institutions were incorporated. The sum of $140,000 had been added to their endowment funds. They returned in all, 103 teachers and 3,241 students, 355 of whom were studying for the ministry. With the assistance of the John F. Slater fund, industrial education had been actively carried on in the institutions for the colored people, in some or all of which had been taught, besides the literary, scientific, and theological branches, carpentering, furniture-making, house-painting, brick-making and mason-work, shoe-making, printing, agricultural and horticultural work, sewing by hand and with machines, dress-making, millinery, laundry-work, and cooking.

Missionary Union.—The seventy-first annual meeting of the American Baptist Missionary Union was held at Saratoga Springs, N. Y., June 1st. The Rev. Edward Judson, D. D., presided. The Board of Managers reported that the total receipts of the society for the year had been $395.699, and the total of appropriations, $446,315, leaving a deficit in its accounts of $50,616. In view of the growth of the debt of the Union, which was accounted for by the statement that the enlargement of its work had exceeded the contributions of the churches, a resolution was passed to the effect that "as the special and primary object of this society is direct evangelization by the preaching of the gospel and the circulation of the Scriptures, the Executive Committee be advised to consider the expediency of diminishing the unduly large amount of money expended in educational work, that thereby the preaching force may be increased, or at least may not be diminished at this crisis; the retrenchment, which seems to be imperatively demanded, being made to fall so far as possible on the work of education, and the burden of this work being thrown more and more on the native converts to Christianity." A suggestion was also approved, to be conveyed to the Woman's Foreign Mission Societies, of "the importance and desirableness of diverting some considerable portion of their increasing contributions from the work of education—to which they are almost entirely devoted—to the support of direct evangelistic work for the conversion of the men, women, and children in heathen lands." The reports from the mission-fields showed that there were in the Asiatic and African missions—in Burmah, Assam, the Telugu district of India, among the Chinese in China, and at Bangkok, Siam, in Japan, and among the Bassas and on the

Congo, in Africa—44 stations, 857 out-stations, 231 missionaries, 791 native preachers, and 572 Bible-women and other native helpers, in all 1,594 missionary laborers; 588 churches, of which 325 were self-supporting; 55,941 members, with 3,738 baptized during the year; 144 Sunday-schools, with 5,743 pupils; 785 schools, of which 263 were self-supporting, with 854 native teachers and 17,045 pupils. The number of church buildings and chapels was 405, the value of which was estimated at $402,489; and the total amount of contributions from the mission stations, so far as was reported, was $39,212. From the European missions—in Sweden, Germany, France, Spain, and Greece—were returned 929 preachers, 572 churches, and 61,550 members, with 6,776 baptized during the year; making the grand totals, for all the missions, of 1,720 preachers, 1,160 churches, and 117,491 members, with 10,514 baptized during the year.

Autumnal Conference.—The fourth Autumnal Baptist Conference was held in New York city, beginning Nov. 10. Papers in the previously arranged programme of subjects were read, as follow: "The Indian Question," by H. L. Wayland, D. D.; "The Mormon Question," by the Rev. T. A. K. Gessler; "Socialism, False and True," by President D. J. Hill, LL. D.; "Church Finances" (*a*) "Tenure of Property," by the Rev. Alfred Taylor; (*b*) "Current Expenses and Benevolence," by H. H. Lamport; "Christian Art in Relation to Baptism," by E. Dodge, D. D, LL. D.; "Liturgy in Baptist Churches," by the Rev. Edward Braislin; "The Revised Version of the Scriptures; its Practical Use," by H. F. Colby, D. D.; "Tests of Admission to the Church," by Prof. T. Harward Pattison, D. D.; "The Spiritual Life as affected' ' (*a*) "by Intellectual Problems," President A. A. Kendrick, D. D.; (*b*) "by Social Conditions," the Rev. Richard Montague. The readings of the papers were followed by general voluntary discussions of the subjects to which they appertained.

Southern Baptist Convention.—The Southern Baptist Convention met at Augusta, Ga., May 6. The Rev. P. H. Mell, D. D., was chosen president. A question arose on the organization of the body concerning the admission of two woman delegates who had been commissioned by the State Convention of Arkansas. The majority report of the committee to which the subject was referred, favored the admission of the women, while the minority report opposed it as not contemplated in the constitution of the convention. A motion was adopted to substitute the minority report for the majority report, whereupon the women withdrew their application. The Board of Foreign Missions reported that its total available funds for the year had been $81,289, and that it had a balance in the treasury of $1,144. Fifteen new missionaries had been sent out. Special mention was made in the report of the missions in Mexico, Brazil, West Africa, China, and Italy.

The receipts of the Home Mission Board had been $69,430; and the accounts showed a balance against the board of about $300. One hundred and eighty-five missionaries had been employed, who had supplied 4,260 churches and baptized 2,931 persons. Fifty-three new churches had been organized, and 14 meeting-houses had been built. Two ministers had been employed as theological instructors of the colored ministry. The woman's missionary organizations of the churches represented in the convention were invited by resolution to appoint annually a brother of their own State for each one hundred dollars they may have paid to either of the boards, to represent them on the floor of the convention. At the meeting of the Home Mission Board, connected with the convention, it was decided to take measures to make the Indian missions self-sustaining, and to renew the appointment of a competent man to hold theological institutes among the Indians.

II. Seventh-Day Baptists.—The Seventh-Day Baptist General Conference met at Alfred Centre, N. Y., Sept. 23. The Hon. William L. Clark, of Rhode Island, presided. Statistical reports were received from 65 of the 94 churches of the denomination, which returned 7,676 members, and a gain of 159 from the previous year. Sixty-eight Sabbath-schools, being two thirds of the whole number, reported 480 teachers, 369 officers, and 4,907 pupils. The Woman's Board made its first annual report, from which it appeared that $2,500 had been raised by the women of the denomination for denominational work. The treasurer of the Memorial Fund reported that he had $82,000 in his hands, the greater part of which had been devoted to denominational objects. Several bequests and gifts of property had also been made for the fund, the value of which was not yet estimated. The receipts of the Missionary Society had been $9,886, besides a gift of real estate which was worth not less than $500. Of this sum, $7,464 had been contributed for general and special purposes, and $2,422 for the Permanent Fund. The expenditures had been $9,524: $3,733 for China and Holland; $4,536 for domestic work; and $1,254 for administration, etc. The society was in debt to the amount of $1,392. In the mission at Shanghai, China, were reported one missionary, one Sabbath-school, day-schools, and 18 church-members. Twenty-one agents of the society laboring in the home field returned 92 additions, 53 of which were by baptism. The Education Society submitted the statistical reports of Milton College, Wisconsin, and Alfred University, New York. Eighteen thousand copies of tracts had been published by the Tract Society. The first volume of a book on the Sabbath by the Rev. Dr. A. H. Lewis had been published, and the second volume, in press, was nearly ready. Six regular periodicals were published under the direction of the society. A resolution was adopted by the Conference to the effect that the Seventh-Day Baptists, "believing in the principles of humanity and of the Christian religion, and being themselves engaged in efforts to establish Christianity in China, desire to place on record their earnest protest against the unchristian policy of our Government with respect to the immigration of the Chinese, and their abhorrence of the recent most unlawful and inhuman killing of Chinese by miners in Wyoming Territory." Engrossed copies of this resolution were ordered sent to the Chinese legation in Washington, the Secretary of State of the United States, and the mission in China. Resolutions were adopteda pproving the principle of prohibition of the traffic in intoxicating liquors, and declaring the license system, high or low, as applied to that traffic, "wrong in principle, and a crime against God and man."

III. Free-Will Baptist Church.—The following is a summary of the statistics of the Free-Will Baptist churches, as they are given in the "Free-Will Baptist Register for 1885": Number of yearly meetings, 46; of quarterly meetings, 185; of churches, 1,496; of ordained preachers, 1,286; of lincensed preachers, 159; of members, 80,913. In addition to the churches represented in these are many other small Free-Will Baptist bodies in the Southern and Western States, substantially agreeing in faith and practice with this Church. The "Liberal Baptist Year-Book," published in 1884, makes the following estimates of the numbers of members of such bodies: Various Free-Will Baptist associations in the United States, 13,190; General Baptists, 13,225; Separate Baptists, 6,329; United Baptists, 1,400; Church of God, 40,000; Free Christian Baptists of New Brunswick, 10,777; Free Baptists of Nova Scotia, 3,415. These, added to the numbers recorded above, would make 169,249 members of church of similar faith with that of the Free-Will Baptist Church.

The latest reports of the Free-Will Baptist benevolent societies at hand are those of 1884, which were presented in October. The Education Society returned for that year, its forty-fifth, a total income of $8,531; while the amount of expenditures was $2,227, and $6,225 had been invested. The total amount of invested funds was $10,616. The society had afforded aid to twenty-one students in the Theological and other schools of the Church, to the amount of $1,119. The educational institutions include Hillsdale College, Mich., which reported an attendance of 867 students; Bates College, Lewiston, Maine, with a theological school attached; Storer College, Harper's Ferry, W. Va., where special attention is given to the instruction of freedmen; Rio Grande College, Gallia County, Ohio; Ridgeville College, Ridgeville, Ind.; and five seminaries and preparatory schools.

The Sunday-School Union made an imperfect report of 228 schools, with an aggregate membership of 25,915.

The receipts of the Home Mission Society (including $1,548 contributed through the Woman's Mission Society) had been $12,955, and the appropriations made by it had amounted to $4,800. The sum of $2,034 had been raised in the Church Extension department.

The receipts of the Foreign Missionary Society had been $19,268, and its disbursements $17,940. Its permanent fund was $8,700. The mission is in India, and its returns are included in the general denominational statistics under the heading of the Orissa and Bengal Yearly Meeting. It includes eight churches, with which are connected a Bible-school, seven common schools, and sixty-three jungle-schools and a dispensary. The Woman's Missionary Society returned $3,863 of receipts—in addition to those of the former society—and co-operates with the society in the support of schools for girls, Zenana missions, and a Girls' Orphanage, in connection with the Indian mission. The mission returned in all 566 communicants with 40 additions by baptism during the year, 3,135 Sunday-school scholars, and a native Christian community of 1,004 souls. The contributions by native members amounted to 500 rupees.

IV. Regular Baptists in Great Britain.—The following is a summary of the statistics of the regular Baptist churches in Great Britain as they are given in the "Baptist Year-Book":

Number of churches, 1,961; of chapels, 2,894, having sitting accommodations for 882,503 persons; of pastors, 1,434; of teachers in Sunday-schools, 39,035; of Sunday-school pupils, 384,013.

The regular annual (spring) meetings of the Baptist Union of England and Wales, and of the societies affiliated with it, were held in London in the last days of April. The report of the Council of the Union showed that, on the 31st of December, 1884, accommodation existed in 3,900 chapels for 1,160,000 persons. The reported membership in 2,699 churches was 312,460, an increase of 7,600 from the previous year. The sum of £71,000 had been expended in new chapels for the provision of about 18,600 sittings, and the sum of £85,000 had been paid toward the diminution of debt.

The ninety-ninth annual meeting of the Baptist Missionary Society was held April 30th. Mr. Joseph Hoare presided. The receipts of the society had been £67,828, and the expenditures £67,353, the largest in one year during the society's existence. The debt of the previous year had been removed, and the society had a balance in its treasury for the first time in thirteen years. Twenty-two missionaries had been accepted by the committee. The federated colonial churches of Australia contemplated raising £2,000 a year for strengthening the mission in Eastern Bengal.

The mission-fields—in India, Ceylon, China, Japan, Central Africa (the Congo), the west coast of Africa (Cameroons and Victoria), the

West Indies, Norway, Brittany, and Italy—returned 83 stations, 432 sub-stations, 130 missionaries, 292 native evangelists, and 3 female teachers connected with the West African mission. Mr. H. M. Stanley was present at the anniversary of the society, and spoke of the good results that were following its work in the Congo country.

The Baptist Zenana Mission returned receipts amounting to £6,209, and the expenditure of £5,543 in behalf of its work in India. It had agents at 15 important towns in that country, consisting of 38 lady zenana visitors, 15 assistants, and 83 native Bible-women and school-teachers, by whom 960 homes were regularly visited and 1,270 pupils looked after. The society supported 2 boarding-schools with 80 girl pupils, and 30 day-schools with 950 children, and returned 7,000 dispensary patients.

The autumnal meeting of the Baptist Union was held in Swansea, Wales, beginning October 6th. The Rev. Dr. Green presided. A paper was read on the progress of religion in Wales, which was claimed to be due chiefly to the work of Nonconformists. A resolution was passed, calling upon all members of Baptist churches possessing the franchise to vote in the coming general election, "to be loyal to their conscience and the Saviour at the polling-booth, and so to recognize the responsibility of Christian citizens."

BASE-BALL. The now national field-game of the United States known as base-ball was evolved from the old English school-boy game of "rounders," which is almost obsolete. Beyond the fact that the form of the field on which both games are played is similar, there is scarcely any resemblance between them, the original sport being a mere boyish pastime, while the American game of base-ball is a sport requiring the trained skill of manly athletes to excel in it. The development of base-ball in the United States has quite an interesting history. It first appeared in the Atlantic coast cities in the form of an improved phase of rounders known as "town-ball," and about the oldest town-ball club in the country was the Olympic, of Philadelphia, which was first organized in 1833. The game was also known in New England towns about that period, but not to the extent of its being played by any special clubs. Afterward, however, it was modified somewhat and became a recognized Eastern States field sport under the distinctive title of "The Massachusetts Game"; the difference between town-ball of the Philadelphians and the "Yankee game" lying chiefly in the delivery of the ball to the bat and in the size and weight of the ball used. The pitcher in "town-ball" was only allowed to toss or pitch the ball to the bat, while in the "Massachusetts game" throwing the ball to the bat was the custom; the ball in "town-ball" was ten inches in circumference and weighed six ounces, while in the "Massachusetts game" the ball was not more than half that size or weight, besides which smaller bats were used in the latter game. Ten or twelve years after the organization of the Olympic Club in Philadelphia, a still further advance in the development of base-ball began to be made, two or three base-ball clubs springing into existence in New York in 1845, prominent among which was the Knickerbocker Club, the Nestor of the national game in the metropolis. The organization of the Knickerbocker Club in itself presents a brief but interesting chapter. As early as 1842 a number of the votaries of the then existing game of base-ball used to meet for practice on the vacant lots at Twenty-seventh street and Fourth avenue, and here it was that the old club may be said to have been born. A year afterward the advance of the city's boundaries obliged the ball-players to change their field to the vacant grounds on Murray Hill. When this latter locality became untenable from the advance of residences up-town, the players emigrated to Hoboken, and prospecting for a permanent place for settlement they selected the southern end of the Elysian Fields, and in 1845, after playing on their new grounds during the summer, the Knickerbocker Base-Ball Club became a permanent organization, the date of the adoption of its club-playing rules being September 23 of that year.

The Original Rules.—By way of showing the contrast between the old rules of the game in vogue thirty years ago, and those of the modernized and perfected game, we give below the first code of rules adopted by the Knickerbocker Club in 1845:

SECTION 1. The bases shall be from "home" to second base, forty-two paces; from first to third base, forty-two paces equidistant.

SEC. 2. The game to consist of twenty-one counts or aces, but at the conclusion an equal number of hands must be played.

SEC. 3. The ball must be pitched and not thrown to the bat.

SEC. 4. A ball knocked outside the range of the first or third base is foul.

SEC. 5. Three balls being struck at and missed, and the last one caught, is a hand out; if not caught, is considered fair, and the striker bound to run.

SEC. 6. A ball being struck or tipped, and caught either flying or on the first bound, is a hand out.

SEC. 7. A player, running the bases, shall be out if the ball is in the hands of an adversary or on the base, or the runner is touched by it before he makes his base; it being understood, however, that in no instance is a ball to be thrown *at him.*

SEC. 8. A player, running, who shall prevent an adversary from catching or getting the ball before making his base, is a hand out.

SEC. 9. If two hands are already out, a player running home at the time a ball is struck, can not make an ace if the striker is caught out.

SEC. 10. Three hands out, all out.

SEC. 11. Players must take their strike in regular turn.

SEC. 12. No ace or base can be made on a foul strike.

SEC. 13. A runner can not be put out in making one base, when a balk is made by the pitcher.

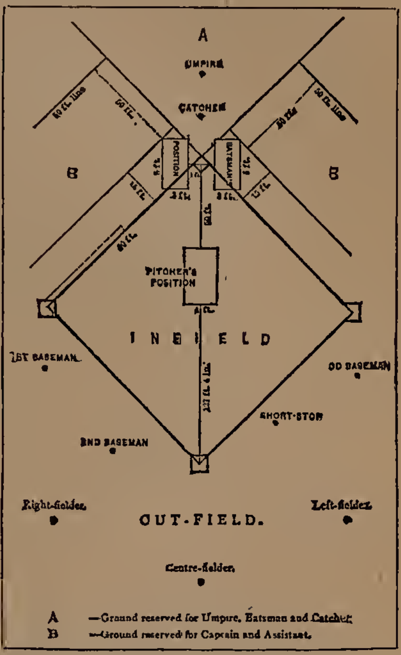
SEC. 14. But one base allowed when the ball bounds out of the field when struck.

Prior to the adoption of this simple code of rules a base-runner could only be put out if he was hit by the ball thrown at him while running from base to base. The New York Club rules of the Knickerbockers of 1845 governed the game in the metropolis up to the year 1857, when the then existing clubs—prominent among which were the Knickerbocker, Gotham, Eagle, and Empire, of New York; the Excelsior, Putnam, Atlantic, Eckford, and Continental, of Brooklyn; and the Harlem and Union of Morrisania—met together in convention in May, and organized a "National Association of Base-Ball Players." The new code of playing-rules adopted by this Association in 1857 was another step in the evolution of the game toward a perfect development. The "New York game"—as the game as played under the Association rules was then called, in contradistinction to the Philadelphia town-ball, and the Eastern, Massachusetts, or New England game—made rapid strides in popular favor during 1858 and 1859. But it was left to the Excelsior Club of Brooklyn to give an impetus to the increasing popularity of base-ball, and this was done by the two grand tours this club made in 1860, the first through the western cities of New York State, and the second through Pennsylvania and Maryland. In fact, it may be said that our American game started on its voyage of life in 1860, for its previous existence had only amounted to a series of trial-trips, as it were, preparatory to its popular invasion of the Americanized portion of the Western world. What the Knickerbocker Club did in the earlier period of the history of the game, in establishing base-ball on a permanent basis, the Excelsior Club followed up by their successful effort to extend its popularity. The advent of the then noted Excelsior Club nine in the cities of Albany, Troy, and Rochester, and afterward in Philadelphia and Baltimore, not only spreading the fame of that club far and wide, but in popularizing the sport, accomplished in one year what a whole decade of ordinary work would not otherwise have done. One result of this tour was a large addition to the number of base-ball clubs outside of the metropolitan home of the game, as was shown by the increase of the list of members of the National Association from twenty-five clubs in 1858 to eighty-odd clubs in 1861, the year following the tours of the Excelsior Club. The officers of the first National Association, elected in 1858, were as follow: President, William H. Van Cott; First Vice-President, Dr. J. B. Jones; Second Vice-President, Thomas S. Dakin; Recording Secretary, J. Ross Postley; Corresponding Secretary, Theodore F. Jackson; Treasurer, E. H. Brown.

The playing-rules of the game adopted by the National Association in 1858 were crude and incomplete as a whole, though they sufficed for the purposes of the half-organized style of play in vogue at that period. In the first place, the regulation ball was too heavy and too cumbersome for really skillful fielding, its legal dimensions admitting of a weight of six and a quarter ounces and a circumference of ten and a quarter inches, an ounce heavier and an inch larger than the ball now in use. Secondly, the bat was unlimited as to its length, a sixty-inch bat being then in use by some players. The pitcher's position was undefined, except that he was not to step in front of a line forty-five feet from the home-base, and this line was twelve feet in length. Then, too, while the batsman was subject to the penalty of called strikes for not hitting at fair balls, the pitcher was not punished at all for a wild delivery of the ball. The boyish rule of the bound-catch of fair balls prevailed, and base-running was checked by the prohibition of taking a base on a fly ball-catch until the ball had been held by the pitcher. But the rules were amended year after year, and the game approached nearer the point of perfect play; though it required a whole decade of yearly revisions before base-ball was thoroughly nationalized, and a really new method of playing it practically developed.

The Theory of the Game.—There is no manly field-game in existence the theory of which is so easy of comprehension as that of base-ball, and hence comes much of its great popularity; and yet to excel in the game as a noted expert requires not only the possession of the physical attributes of strength, endurance, and agility, combined with good throwing and running powers, but also the moral and mental forces of courage, pluck, and nerve, and of sound judgment, quick perception, thorough control of temper, and the presence of mind to act promptly in critical emergencies. The simple theory of base-ball is briefly as follows: A tolerably level field being selected, a space of ground is marked out in the form of a diamond with four equal sides, on each corner of which diamond field are placed the four bases, three of which are base-bags, and the fourth—home-base—of stone. The contestants in the game include nine players on each side, who occupy the nine positions in the field, which comprise the pitcher and catcher, the three basemen, the short-stop, and the three out-fielders. When the game begins, one nine take up their positions in the field, and the other side send their men to the bat. The object of the field side is to put out three of their batting opponents, in which case the latter in turn go to the field. The batting side, on their part, strive to hit the ball pitched to them in such a manner as to enable them to run to bases safely without being put out, and also to score runs, a run being scored every time a base-runner touches the home-base after being at the bat, before being put out, this being done either by a series of hits, or by one long hit that sends the ball beyond the reach of the out-fielders. The batting side send their men to the bat in rotation until three of them are put out, and then the innings-play ends. This goes on until nine innings on each side have been played, and then the side that has scored the most runs wins the game. In case the scores are equal at the end of the ninth even innings, then play is continued until one side or the other scores a majority of runs, or until play is stopped by darkness. Unless five innings are completed on both sides, however, there can be no game. This is base-ball in its theoretical form. As played under the present code of rules governing it, of course more complex details are introduced; and thoroughly to interpret the professional code of the game, as the official association umpires of the period are required to do, demands mental powers of no mean ability. A match-game of base-ball averages not over two hours of time in playing, even at the hands of amateur exemplars of the game, and still less when trained professionals are the contestants.

Professional Playing.—In the early period of the history of base-ball the game was entirely in the hands of the amateur class of the fraternity, professionals being debarred, under the old Association rules, from participating in match-games. With the growth of base-ball in popularity, however, came the opportunity to make money out of it, and the old National Association had not been in existence ten years before professionalism, in a disguised form, began to find a foothold in the institution; and in 1869 and 1870 this element became a ruling power in the Association, and its aggressions, culminating at the close of the season of 1870, led to a division in the ranks of the fraternity at large, one result of which was the organization of two National Associations out of the clubs that had composed the first Association—the amateur class organizing the "National Amateur Association" in 1871, and the professional clubs establishing the first "National Association of Professional Base-Ball Players" the same year. From this time forward professional clubs increased in number each season, and fifteen years after the organization of the first professional association, over a dozen different leagues of professional clubs were in existence, and a capital reaching into hundreds of thousands of dollars was invested in the business. This growth of professionalism did not lessen the amateur class of the fraternity at all; on the contrary, it spread the growth of the game in general popularity, though there was an interregnum when sundry evils, which followed in the train of professional playing, temporarily had a damaging effect on the good name of the national game, and for a time retarded its advance in public estimation. But the establishment of the National League in 1876, which was the successor of the first professional National Association, introduced reform measures that had the effect of purging the professional clubs of the "cracked" element, which had worked its way into the arena, and the war the League made upon pool-selling in connection with professional ball-playing — the greatest curse American sports have ever suffered from—did much to purify the ranks of the fraternity. Since then the National League, and the later organized American Association, have combined their forces in support of stringent laws in favor of playing the game in its integrity, and now honest play is the rule—enforced by strong laws—throughout the entire professional arena.



The Grand Tours.—From the period of the grand tour made by the Excelsior Club in 1860 up to 1880, three events occurred that formed noteworthy chapters in the records of the game, and these were the tour of the National Club of Washington to Cincinnati, St. Louis, and Chicago in 1867; the tour of the Cincinnati Club to Maine in the East, New Orleans in the South, and California in the West in 1869, during which that club accomplished what no other club has since done, and that was to go through the entire season without the loss of a single game; and the visit to Great Britain in 1874 by the Boston and Athletic Professional Clubs. These tours had a great effect in extending the popularity of the game, the trip to England especially giving the American national game a world-wide fame; besides which the remarkable skill in fielding shown by the American base-ball players, while playing cricket as well as base-ball, opened the eyes of the English cricketers to the possibilities of the American game as an excellent training-school for learning to excel in fielding for use in playing cricket. The ball-players did not lose a single game in which they played as cricketers while in England.

How to learn the Game.—There are two ways of learning to play base-ball: the one is to learn it for the simple object in view of recreative exercise; and the other is to acquire a thorough practical knowledge of the game in order to become a professional expert. The former involves but little time or trouble, inasmuch as the theoretical knowledge requisite for the purpose can be readily acquired in an hour's study of any standard work on the subject; while an afternoon's practice on the field, in an amateur contest, will afford all the practical information necessary. To become an expert professional player, however, not only necessitates an attentive study of the rules of the game, and of those special applications of them known as "points," but also a regular course of training in order to insure the highest degree of skill in each of the several departments of the game. To learn the game, therefore, for an hour or two of recreation is a simple task, but to go into a regular course of systematic training in order to become a skillful professional player is like everything else in which any special standard of physical skill is aimed at, viz., a task that involves steady and persevering application, fatiguing exertion, plenty of pluck, thorough control of temper, and considerable powers of endurance; and, withal, the physical aptitude to excel in one or the other of those special departments of the game known as "pitching," "catching," "base-play," out-fielding, batting, and base-running.

The Playing-Rules.—It would be beyond the scope of this article to occupy the space with details of the regular code of playing-rules of the game that now govern it, and therefore, in place of the elaborate rules of the game, we embody the pith of the rules in describing the playing of a regular match-game, in which are introduced the prominent points of play as developed under the rules of the National League, the professional code governing the game throughout the country.

Supposing the diamond field laid out, contesting nines chosen, an umpire selected, and the choice of innings tossed for, the nine captained by A going to the bat and that by B going to the field, the umpire calls play, and the contest begins. When the batsman takes his position at the bat, the umpire asks him whether he wants the ball delivered to him "high" or "low," and on his naming the character of the ball he wants, the pitcher is required to deliver the ball as directed; and on his failure to do this, the umpire inflicts the penalty of "called" balls, a penalty also applicable to the pitcher's failure to deliver the ball over the home-base. When six such unfair balls have been pitched—that is, "tossed," "thrown," or "jerked"—to the bat, the batsman becomes a base-runner, and he is given one base on the six called balls. If the batsman succeeding him is similarly sent to his base, then the occupant of the first base is given his second; and, in case of four men being similarly given their bases in succession, then one run is scored on balls called. If three fair balls—viz., balls over the home-base and at the height called for—are delivered to the bat, and the batsman either fails to hit them, or refuses to strike at them, the umpire decides him out on "strikes," unless the catcher fails to catch the ball "on the fly"—viz., before it touches the ground—in which case the batsman must be put out at first base in the regular way, or touched while off the base. The moment the batsman hits a "fair ball"—that is, a ball that strikes the ground in front of the foul-ball lines—he drops his bat and runs for the first base, and in so doing he is privileged to overrun that base after touching it, and then to return to the base without being put out, provided he touches the base in the first place before the ball is held by the base-player while touching the base, but not otherwise. In the case of the batsman's hitting a fair ball, not held on first base as above referred to, which is caught on the fly, he is out; or if a foul ball is similarly caught; or if, in running to first base, he runs outside the path of the base-lines, or if he hinders a fielder from catching the hit ball, he is out. As a base-runner he is also out if he runs three feet beyond the line of the bases to avoid the ball while in the hands of a fielder; or if he be forced to leave a base by the act of the batsman hitting a fair ball, and the ball is held on the base he is forced to run to, before he can touch it, he is out. When the batsman hits a foul ball—a ball touching the ground back of the foul-ball lines—though he is liable to be put out on such ball by its being caught, base-runners are not forced to leave their bases on such balls, as in the case of fair hit balls, and in case they run bases on such foul balls they are privileged to return to the bases they left when the ball was struck, provided they do so on the run. On a foul ball caught on the fly, however, the base-runners are privileged to run a base the moment the catch has been made. There are two classes of foul balls, one class comprising balls hit high in the air, and the other balls hit directly to the ground. If a ball, hit up in the air, falls on fair ground, it becomes fair; if it falls on foul ground, it becomes foul. But if the ball be hit direct to the ground, no matter if it first strikes the ground fair or foul, it only becomes a fair or foul ball as it rests on the ground in rolling from foul ground to fair, or *vice versa*, provided that it so rolls before passing first or third bases. Base-runners are each given one base whenever the pitcher makes a "balk," and this he does whenever he fails to deliver the ball to the bat after making any one of the motions to deliver that he is accustomed to make in pitching, or when he steps outside the lines of his position while in the act of delivering the ball to the bat. The batsman, too, is required to stand within the lines of his position while in the act of striking at the ball, or he will be given out on a "foul strike." Then, too, base-runners are liable to be put out for allowing a fair hit ball to strike their persons while running a base; and also for hindering a fielder from fielding a ball. It will thus be seen that the batsman, first as a batsman and then as a base-runner, is liable to be put out in eleven different ways—first, on the catch of a fair hit ball;

secondly, on the catch of a foul ball; thirdly, on three strikes; fourthly, on a foul strike—all of these chances occurring while he is the batsman; and then, as a base-runner, from being put out at first base; or when touched while off a base; from being "forced" off; for allowing a batted ball to hit him; for not avoiding a fielder while catching or fielding a batted ball; for going beyond the base-line to avoid being touched by the ball; and, lastly, for batting out of his regular turn at the bat.

The Materials. — The size of a ball-ground ranges from three to four hundred feet in width and from four to five hundred feet in length, and the upper end of the ground contains the diamond field. The home-base corner of the diamond must be at least ninety feet from the boundary of the ground. The materials of the game are a ball and bats of the regulation size, and to these are added three base-bags and a stone base, two foul-ball posts and flags, and iron plates for the pitcher's position. The rules defining the measurements of bats, balls, and bases are as follow:

The in-field must be a space of ground thirty yards square.

The bases must be four in number, and designated as first base, second base, third base, and home-base.

The home-base must be of white rubber, twelve inches square, so fixed in the ground as to be even with the surface, and so placed in a corner of the in-field that two of its sides will form part of the boundaries of said in-field.

The first, second, and third bases must be canvas bags, fifteen inches square, painted white, and filled with some soft material, and so placed that the center of each shall be upon a separate corner of the in-field, the first base at the right hand, the second base opposite, and the third base at the left of the home-base.

All the bases must be securely fastened in their position, and so placed as to be distinctly seen by the umpire.

The foul lines must be drawn in straight lines from the outer corner of the home-base through the center of the positions of the first and third bases, to the boundaries of the ground, and a line shall be laid down from first base forty-five feet in length toward the home-base and three feet outside the foul lines.

The pitcher's lines must be straight lines forming the boundaries of a space of ground in the in-field six feet long by four feet wide, distant fifty feet from the center of the home-base, and so placed that the six-foot lines would each be two feet distant from and parallel with a straight line passing through the center of the home and second bases. Each corner of this space must be marked by a flat iron plate or stone six inches square, fixed in the ground even with the surface.

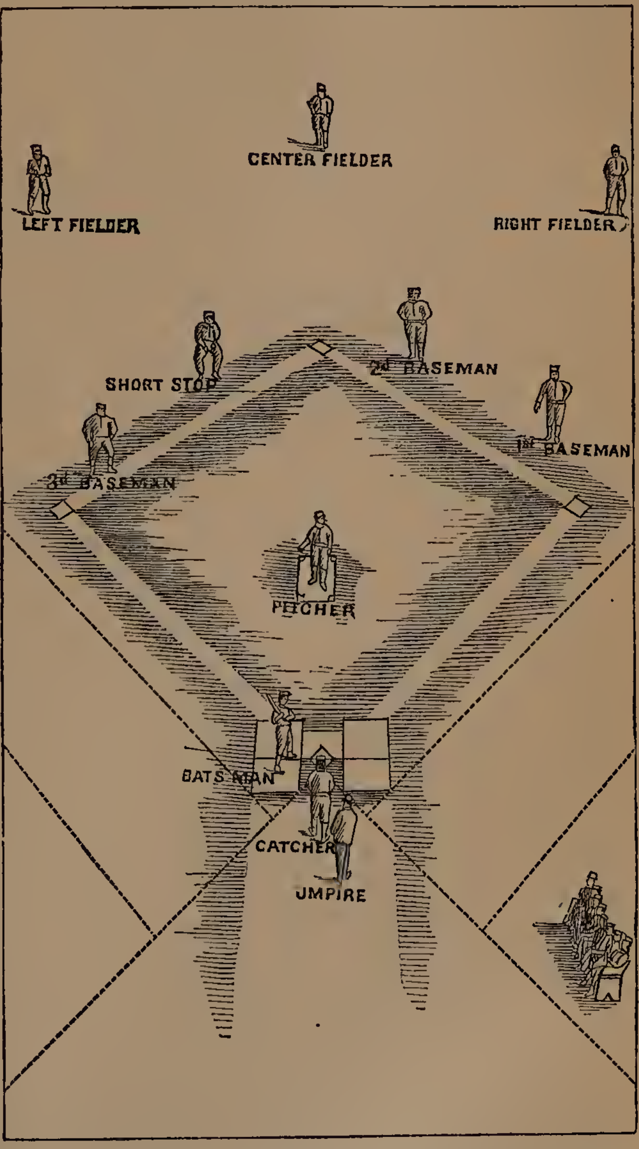
The batsman's lines must be straight lines forming the boundaries of a space on the right, and of a similar space on the left of the home-base, six feet long by four feet wide, extending three feet in front of and three feet behind the center of the home-base, and with its nearest line distant one foot from the home-base.

The ball must weigh not less than five nor more than five and a quarter ounces, avoirdupois. It must measure not less than nine nor more than nine and a quarter inches in circumference.

The bat must be made wholly of wood. It must be round; must not exceed two and one half inches in diameter in the thickest part, and must not exceed forty-two inches in length.

For the rules of the game in detail, see Spalding's "League Guide" for 1886; and for special instructions in the four departments of the game, see hand-books on "Pitching," "Batting," "Fielding," and "Base-Running," by Henry Chadwick.

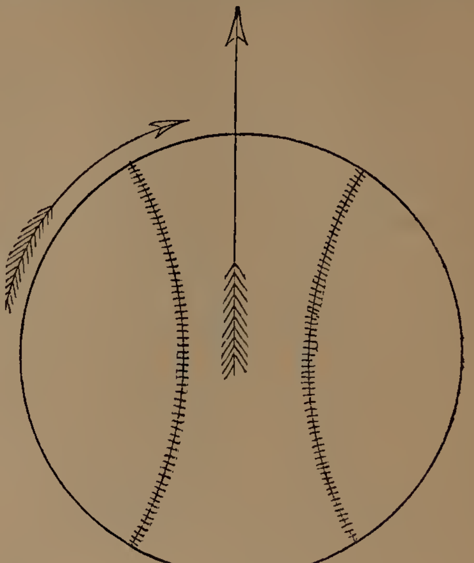
The appended diagram gives the figures showing the measurement of all the different lines and positions of the diamond field, in accordance with the rules of the National League of Professional Base-Ball Clubs for 1886.



The Science of the Game.—Skill in the art of fielding is the most attractive feature of base-ball. It is something all can appreciate and understand. While scientific batting is only attractive to those who fully understand the difficulties attendant upon it, fine play in the field can be enjoyed by every spectator, its beauties being as plainly apparent as is the characteristic blundering in the field of a mere novice in the art. In batting, however, while the great majority fully enjoy the dashing hit of the ball that yields a "home-run," it is only the minority who have sufficient knowledge of the batting "points" in the game to appreciate the scientific work of "facing for position," "timing the swing of the bat," observing "good form" in hitting, and other like points in team-work at the bat. But in fielding every one in the crowd of spectators knows when a fine "pick-up" of a "hot grounder" is made; or when a hard-hit "liner" is handsomely caught "on the fly"; or a short high ball is held after a long run in for it from the out-field; or when an apparently safe hit to right field is changed into an out at first base by the active fielding and swift, accurate throwing-in of the ball to the first-base man. Then, too, the brilliant catching of the swift curved-line balls from the pitcher by the catcher, and the straight, swift throwing of the latter to the bases, are all features of sharp fielding which everybody can appreciate. Hence it is that fielding is the most brilliant and attractive feature of the game. Next to that comes base-running, which is one of the most important essentials of success in winning games, a greater degree of intelligence being required in the player who would excel in base-running than is needed either in fielding or in batting.

Of the four departments of the game of base-ball—pitching, batting, base-running, and fielding—the delivery of the ball to the bat ranks as the most important. Indeed, the "battery" of a club team—viz., the pitcher and catcher—is the main feature of the attacking force in a contest, and it is chiefly on the excellence of the "battery" work that success in a match depends. In the early period of the game's history the "square pitch" of the ball to the bat was the invariable rule; but since the professional rules came into vogue, overhand throwing has been the rule. At first it was disguised, but afterward it was openly allowed under all the codes of playing-rules, and now it is the regular rule of the game throughout the country. There is one peculiar feature of the method of the delivery of the ball to the bat which merits special notice, and that is the power to give a bias to the ball in throwing it to the bat by means of which the ball is made to go through the air in a curved horizontal line, and the ball is made to curve outward or inward toward the batsman, at the option of the pitcher. The theory of this curved delivery is based on the fact that a retarding effect is produced on one side of the ball in its passage through the air, caused by its rotating on its own axis, by which means it deflects from a direct line on the side of the ball that passes through the air the quickest. The appended diagram illustrates the lines of the curved delivery.

This theory is practically illustrated in every match-game played in which a pitcher who is well up in the curve-line delivery occupies the pitcher's position. It was thoroughly tested in public several years ago in Cincinnati before several college principals. The first practical exemplar of the art of curving the ball in pitching was Arthur Cummings, the pitcher of the Excelsiors of Brooklyn in 1867. But it had been exhibited in actual play by Richard B. Willis, of the Lone Star Club of Rochester, seven or eight years before that time.



The Season of 1885.—The base-ball season of 1885 saw the national game in the enjoyment of a greater degree of popularity throughout the United States and Canada than ever before. While amateur clubs could be counted by the thousand in the most populous States of the Union, the professional organizations were more numerous than ever. The game never flourished in Canada to such an extent as in 1885, while North, East, South, and West in the United States it has become the field-sport of the people. In the South, during the past year, base-ball has been received with more public favor than ever before, the Southern Professional Association having become a permanent organization. The contests for the championship pennants of the National League and the American Association during the season of 1885 attracted hundreds of thousands of spectators to witness the championship games. Especially was the struggle for the League pennant a noteworthy one, the closeness of the contest being exceptional in the history of the League. The four games played between the Chicago and New York Club teams in Chicago the last of September, 1885, attracted an aggregate of over forty thousand people to the Chicago Club grounds, and the receipts were nearly twenty-five thousand dollars. At horse-races, pedestrian contests, rowing-matches, and every other public sport in vogue, if the pool-selling and book-making of the gambling fraternity are prevented, nearly all the attraction that draws public patronage is removed; but at the professional ball-matches for championship honors, especially on League Club grounds—where pool-selling and all forms of open public betting are prohibited by the National League laws—thousands of spectators are attracted to the grounds solely by the excitement incident to the game itself.

The Championship Records. — In the amateur branch of the base-ball fraternity the leading exemplars of the game are the players of the various college clubs, which are governed by the Intercollegiate Association, and the contests for college championship honors, especially between the clubs of Harvard, Yale, and Princeton, are among the most attractive games.

As a matter of reference we give below the records of the championship contests of 1885, in which the clubs of the National League, the American League, and the Intercollegiate Associations took part, these being the leading national associations of the two classes of the fraternity, the professionals and the amateurs.

THE LEAGUE RECORD.

CLUBS.	Boston.	Buffalo.	Chicago.	Detroit.	New York.	Providence.	Philadelphia.	St. Louis.	Total won.	Percentage.
Boston	..	10	2	7	3	9	7	8	46	·410
Buffalo	6	..	..	11	1	3	5	12	38	·339
Chicago	14	16	..	15	6	11	11	14	87	·776
Detroit	9	5	1	..	4	6	7	9	41	·379
New York,	13	15	10	12	..	12	11	12	85	·758
Providence	7	13	5	9	4	..	7	8	53	·481
Philadelphia	9	11	5	9	5	8	..	9	56	·509
St. Louis	8	4	2	4	4	8	6	..	36	·333
Total lost	66	74	25	67	27	57	54	72	442	

SUMMARY.

CLUBS.	Won.	Lost.	CLUBS.	Won.	Lost.
Chicago	87	25	Boston	46	66
New York	85	27	Detroit	41	67
Philadelphia	56	54	Buffalo	38	74
Providence	53	57	St. Louis	36	72

THE AMERICAN RECORD.

CLUBS.	Athletic.	Brooklyn.	Baltimore.	Cincinnati.	Louisville.	Metropolitan.	Pittsburg.	St. Louis.	Total won.	Percentage.
Athletic	..	5	10	7	8	11	10	4	55	·491
Brooklyn.	11	..	9	5	10	8	6	4	53	·473
Baltimore	6	7	..	6	7	7	6	2	41	·376
Cincinnati	9	11	10	..	8	10	9	6	63	·562
Louisville	8	6	9	8	..	9	6	7	53	·473
Metropolitan	5	8	6	6	7	..	8	4	44	·407
Pittsburg	6	10	10	7	10	7	..	6	56	·504
St. Louis	12	12	14	10	9	12	10	..	79	·705
Total lost	57	59	68	49	59	64	55	33	444	

SUMMARY.

CLUBS.	Won.	Lost.	CLUBS.	Won.	Lost.
St. Louis	79	33	Brooklyn	53	59
Cincinnati	63	49	Louisville	53	59
Pittsburg	56	55	Metropolitan	44	64
Athletic	55	57	Baltimore	41	68

THE COLLEGE RECORD.

CLUBS.	Harvard.	Yale.	Princeton.	Dartmouth.	Brown.	Amherst.	Total won.	Percentage.
Harvard	..	2	2	2	2	2	10	100
Yale	0	..	1	2	2	2	7	·70
Princeton	0	1	..	2	2	2	7	·70
Dartmouth	0	0	0	..	2	2	4	·40
Brown	0	0	0	0	..	1	1	·10
Amherst	0	0	0	0	1	..	1	·10
Total lost	0	3	3	6	9	9	30	

By these records it will be seen that the Chicago Club won the League championship, the St. Louis Club the American championship, and the Harvard Club that of the Intercollegiate Association. During October of 1885 a series of best four out of seven matches between the Champion League Club of Chicago and the Champion American Club of St. Louis for the professional championship of the United States resulted in each club winning three games, one game being drawn; consequently the question of supremacy was still left undecided.

Noteworthy Events.—Among the noteworthy events within the past twenty years may be named the game played in Buffalo by the Niagara Club of that city with a local nine, in which the Niagara nine scored over two hundred runs in nine innings play. This was in the days of the lively elastic ball. The other extreme was reached on the occasion of a match between the Harvard College nine and the Manchester Club a dozen years later, in which twenty-four innings on each side were played without a single run having been scored, a dead ball being used. At the conventions of the League and the American Association, that were held in December, 1885, no amendments were made to the playing rules of the game, that important business being left for the March meetings of the two Associations, which are to be held in 1886; that of the League in New York city, and that of the American Association in Louisville, Ky.

BASUTOLAND, a British protectorate in South Africa, formerly an appanage of Cape Colony, but since 1883 under the immediate jurisdiction of the Imperial Government. The country is the home of the semi-civilized Basuto tribe of Caffres, the eastern branch of the Chuan family, who follow agriculture and grazing. The district has been called the Switzerland of Africa, from its mountainous character. The bottom-lands are exceedingly fertile, and the uplands contain large areas of pasturage on which cattle and especially horses thrive well. Basutoland is 10,290 square miles in extent, and contains 128,000 inhabitants. The Basutos were conquered by the Free State Boers, after many years of warfare, in 1868. The British Government intervened and made an arrangement by which a portion of the territory was absorbed by the Orange Free State, but the main part preserved for the natives, who were taken under the protection of the British Crown. Subsequently, without the consent of the natives, the district was incorporated in Cape Colony. The Basutos prospered exceedingly until the Cape Government determined to disarm them, and attempted to carry out the measure by force. A war ensued, which cost Cape Colony £6,000,000, while the Basutos were still unsubdued. Finally, at the request of Cape Colony, the British Government took over the administration of the district. The policy of the Imperial Government was, as described by Lord Derby, not to make Basutoland a Crown colony, or to introduce the costly machinery of European officers, but to have the Basutos employ their own machinery of government and be governed according to their own customs. Col. Clarke was appointed Resident Commissioner, and given a force of 150 police to maintain order in Basutoland and on the Free State frontier.

Until their unhappy conflict with the Cape Government and the attendant disorders, the Basutos, who have always been considered the finest type of the Caffre race, were a peaceful, prosperous, industrious people, presenting a shining example of a civilized native community. The war waged upon them by the Cape Government, which transcended the resources of the colony, and which was aggravated by pitting jealous and ambitious chiefs against one another, caused wealth and civilized order to vanish, and produced a startlingly sudden relapse into indolence and savagery. The transfer from colonial to imperial administration did not arrest the process of disorganization and impoverishment. Col. Clarke's efforts were directed mainly to the preservation of order on the Free State border. The Free State Boers were subjected to annoyances from the anarchic condition in Basutoland, which were magnified in their minds by the desire to get at their old enemies, whose rich lands were saved from their greed by the intervention of the British Government in 1868. President Brand complained of a band of naked and starving women who had taken refuge in Free State territory, and, later, expressed fears of raids into the Free State. In December, 1884, Lord Derby replied to President Brand's complaints with the assertion that the obligation to police the border was mutual, and that, if the treaty of Aliwal North contemplated the maintenance of a force of over 150 men, the Orange Free State was equally bound with the British Government. He intimated to Sir Hercules Robinson that, if Basutoland could bear the expense of a larger force than Col. Clarke's 150 men, he had no objection, but would promise no imperial funds for the purpose. The estimated revenue of Basutoland for the year ending June 30, 1885, was £20,950. The budget of expenditures disposes of nearly the entire sum without making any provision for public works, education, or hospitals, £9,816 appearing under the head of police expenditure. The natives agreed, upon being taken over by the Imperial Government, to pay a hut-tax of 10*s*. This they have generally refused to pay. Only £5,000 was collected in 1885, one quarter what the tax formerly yielded when the population was smaller.

One chief cause of the demoralization and anarchy of Basutoland was the spread of drunkenness. With the exception of three, all the chiefs became the slaves of the newly-acquired habit. The ordinary administration of justice was consequently entirely neglected. The chiefs began to seize the cattle of their people on false pretexts. Quarrels and murders, the ordinary concomitants of drunken debauches among Caffres, grew frequent. Crimes of violence were gratifying to the chiefs, because they afforded an excuse for imposing fines. Col. Clarke did his utmost to stop the traffic in brandy, but with his small police force could not restrain the lawless traders. Prior to the Basuto war, brandy-drinking was unknown. The English authorities, upon assuming the administration, strictly prohibited the sale of spirituous liquors.

The practice of "eating up," or levying fines, by the chiefs, has become so common that the people have no desire to acquire cattle or other property. Traders complain of extortions that render business difficult. Chiefs do not hesitate to shut up the store of any merchant who offends them. Most of them impose an unauthorized tax of £12 a year upon the traders, who pay the English administration a license-fee of £10.

Upon the restoration of the imperial control the Basutos divided into two parties. Two thirds followed Letsea, who claimed to be paramount chief, in accepting the proposed regulations. Masupha, the other great chief, declared that he would be a "Queen's man," but only to rule himself in the Queen's name. Yet the loyal chief was not more willing than the rebel to conform to the regulations and sacrifice his authority as chief. Upon the rumor that Gen. Warren's force was to be sent to Basutoland, as was the original intention that it should be after the pacification of Bechuanaland, loyal chiefs, like Lerothodi, as well as the rebel chiefs, called out their fighting-men to resist the invasion. The territory of Masupha lies next to the Free State frontier. It was there that the Resident Commissioner was obliged to concentrate his small force, which was insufficient to secure respect for his authority, and that outrages to traders occurred that were likely to lead to international complications. There, also, drunkenness was most prevalent, for the Boers pay for work and goods in brandy, and could not be restrained by their own laws or the British regulations from importing it into Basutoland.

The presence of Samuel Moroko on the Free State border was an additional source of danger. Upon the death of his father, chief of the Baralongs, whose territory is inclosed in the Orange Free State and was protected by treaty with Great Britain, he quarreled with his brother Sepinaar for the succession. They referred the dispute to the arbitration of President Brand, of the Free State, who decided in favor of Sepinaar. In consequence of the murder of the latter in 1884, the Free State annexed the territory. Samuel, upon his expulsion, issued a proclamation as chief, warning off all intruders from his territory, and then established himself on lands granted him by the Basutos.

In June, 1885, a commission of the Free State Volksraad reported that in inter-tribal conflicts Basutos had been driven across the border, as in the cases of Jonathan and Joel; that cattle belonging to burghers had frequently been stolen by Basutos, and, on one occasion, openly seized by Lerothodi; that Free State traders have to pay double licenses, and that the danger of disturbances on the border can only be prevented by the establishment of British authority on a steadfast basis, or the withdrawal of the British protection, leaving the Orange Free State to regulate its relations with the Basnto chiefs directly, as it was accustomed to do before the Basutos were declared British subjects by the treaty of Aliwal on Feb. 12, 1869.

BECHUANALAND, a British protectorate in South Africa, the country of the western Chuan Caffres, extending along the western frontier of the Transvaal from Griqualand West to Lake Ngami, and separated from the Hottentot lands on the Atlantic coast by the Kalahari Desert. The protectorate extends to 22° south latitude, and includes an area of about 170,000 square miles. The southernmost district is the land of the Batlapin tribe, whose chief is Mankaroane, with his capital at Taungs. North of them are the Baralong, with Montsioa for their chief, having his seat at Mafeking. Beyond them are the Bangwaketse, under the aged chief Gasseitsiwi, living at Kanya. North of them is the country of Sechele, chief of the Baquena tribe, with Molopololo for his capital; and farther north the Bamangwato, whose chief, Khame, resides at Shoshong. The country of this chief, 80,000 square miles in extent, was not included in the protectorate as finally established. The Bakatla tribe, ousted from the Transvaal, live on the lands of the Bangwaketse and Baquena.

The Cape Government, with the approval of the home authorities, proclaimed a protectorate over Bechuanaland in 1884. As difficulties arose which prevented it from becoming effective, the Imperial Government assumed direct authority over the territory.

The proclamation of imperial protection and British jurisdiction over Bechuanaland was published on Jan. 27, 1885. The limits of the new colony were officially defined as "that part of Africa situate west of the boundary of the South African Republic, north of the Colony of the Cape of Good Hope, east of the 20th meridian of east longitude, and south of the 22d parallel of south latitude." It is a salubrious region, consisting for the most part of a plateau, with an elevation of from 4,000 to 6,000 feet above the sea. Except in the southern portion, where the trees have been cut to furnish fuel for the steam-engines in the diamond-mines, the country is well wooded. The bottom-lands contain rich soil, producing good crops of Indian corn, wheat, and millet. The plains are generally covered with grass, and are said to be the best pasture-land in South Africa. The water-supply is deficient at certain seasons, but by sinking wells water can always be obtained.

Encroachments of White Settlers.—The Bechuanas were formerly rich in oxen and sheep, while the plains furnished them an unceasing supply of food in the enormous droves of hartebeests, giraffes, wildebeests, elands, and various kinds of deer. The invasion of white men, and inter-tribal conflicts, fomented by whites, have reduced their pastoral wealth and diminished their own numbers by famine. Freebooting whites have robbed them of their cattle. For many years fugitives from justice and lawless adventurers from the Dutch republics and Cape Colony have found a refuge in Bechuanaland. Wars between the chiefs were instigated by these adventurers, who engaged on the different sides as "volunteers," receiving for their services each man a "farm" of from 4,000 to 6,000 acres. Land speculators furnished stores and ammunition, and took the farms thus acquired by the freebooters. An exceptionally protracted and relentless conflict, in which Massouw and Moshette were leagued against Montsioa and Mankaroane, was coincident with a new wave of extension among the trek-Boers. Large numbers of volunteers, some of British but most of Dutch-African origin, took part on both sides. From the lands of the defeated Baralong and Batlapin chieftains were carved out the republics of Stellaland and Goshen. Various reasons for British intervention were given. The Transvaal Government was taken to task for allowing its citizens to drive the natives from their lands and set up states across the border under its auspices in violation of the spirit of the treaties with England. Rude answers were returned to the English representations. The bitter feelings of the Transvaal war were revived in England, and between the two white races in South Africa. A demand was raised for the chastisement of the Boers, to wipe out the defeats of the Transvaal war. The Boers boasted that the English troops, who could not stand up against their splendid marksmanship at Majuba, were afraid to face them again. The expelled Bechuanas were dying from starvation, and their sufferings appealed, not only to English philanthropy, but to the English national pride, because the chiefs Montsioa and Mankaroane had given aid and succor to the English troops in the Transvaal war. Their quarrel with the old allies of the Boers dated from that period. It was therefore their adherence to the English that led to their destruction. The British party in South Africa and the moneyed class wished to have Bechuanaland opened to white settlement in a more regular way, and not seized by trekkers, or partitioned out among filibustering "volunteers." The question of the trade route came up and furnished a powerful additional motive for interference. The best route to the Zambesi and the interior of Africa from the Cape goes through Bechuanaland. Exactions of £40 per wagon are levied along the Transvaal route. If Bechuanaland fell into the hands of the Boers, the commerce of Cape Colony with the interior would be hampered by these tolls. The settlement of the Germans on the coast directly opposite created apprehensions of a greater danger. If Germany should extend her annexations inland, and perhaps form a political combination with the Transvaal State, and purchase Delagoa Bay, or annex St. Lucia Bay, a barrier might be thrown across the continent that would effectually shut out England and Cape Colony from the trade of southern Central Africa. The railroad already completed brought goods a distance of 500 miles from the coast to within 100 miles of the frontier of Cape Colony. The Bechuanaland route is remarkably favorable for the extension of the railroad in the direction of the Zambesi. Notwithstanding the risks and losses and great expense of wagon-carriage, British commerce has already penetrated as far as Lake Ngami. The trade of Cape Colony with the interior, before the incursions of white robbers and freebooters, was valued at about a million and a half pounds sterling per annum; but since the systematic outrages of the filibusters began, wide tracts of fertile land have become a desert, and the business of the trade-route has greatly dwindled. The prospect is the more inviting, because certain districts at the farther confines of Bechuanaland, and in Matabeleland beyond, are known to be rich in gold. It was the uncomfortable proximity of the Germans that gave rise to the effective demand of the Cape Colonists that Bechuanaland should be annexed and the trade-route secured. In meeting their wishes the British Government was able to fulfill its duty to its old allies, and see that the tribes that had been its friends should not be wiped out for their fidelity. But in its native policy it found, as usual, little sympathy at the Cape. The Dutch party had the upper hand in the Government, and they were not willing that their Transvaal kinsmen should be punished, and that the principle of imperial intermeddling should prevail. The annexation of Bechuanaland, with the certainty that it would ultimately be transferred to Cape Colony, the improvement of the trade-route, and the opening of the country to settlement, were desirable objects to Cape Colony. The English Government was unwilling that the colony should carry them out unless a restoration of their lands was made to the Bechuanas, but was willing to accomplish the task at its own expense, so as to be able to regulate the native question. The Warren expedition was fitted out in November and December, 1884, and entered Bechuanaland in January, 1885. This expedition was understood in Cape Colony and the Transvaal to be a direct menace to the South African Republic. The Rev. Mr. Mackenzie, who was first sent out as agent for the Cape Government upon its proclamation of a protectorate over Bechuanaland, had aggravated the situation by taking a course hostile to the Boers and offensive to the Dutch. The bankrupt state of the Cape treasury prevented the Colonial Government, which was controlled by the Afrikander-Bond or Dutch party, from taking effective steps to establish an administration in the annexed territory. The English party, which went by the name of the Empire League, urged the transfer of the task to the imperial authorities. Preparations were made for sending an English force to establish order. To avert this, or secure possession of the coveted lands beforehand, the Boer interlopers in Bechuanaland attacked the natives anew. Mr. Bethell, the English Resident in Stellaland, was killed in defending them, and Mr. Mackenzie fled to escape a similar fate. The Cape Ministry sent out Mr. Cecil Rhodes in his place. The latter was a person in sympathy with the Afrikander party and agreeable to the Boers. The history of the disturbances in Bechuanaland, of the establishment of the republics of Stellaland and Land of Goshen, and of the circumstances leading to annexation, is related in the "Annual Cyclopædia" for 1884.

The Rhodes Settlement.—While Sir Charles Warren with his volunteer force was on his way from England, the Cape Government obtained permission to settle amicably, if possible, the differences with the Stellalanders and Goshenites. Mr. Upington made the tour of Stellaland, Goshen, and Bechuanaland. By promising that those who occupied farms of which they held titles from the native chiefs would not be disturbed, and by menacing them with the troops under way, he reassured the Boers, who ceased their disorders and offered their submission to the Cape Government. Order was restored when Gen. Warren landed in Cape Colony. In December, 1884, Mr. Rhodes negotiated a settlement in detail with Mr. Van Niekerk, acting on behalf of the Stellalanders. Sir Charles Warren approved the main features, according to which the farmers were to remain in possession of their land. Not satisfied, however, with having come out on a useless errand, and spurred on by the Empire League, an element in England that was hostile to the Boers, he insisted, on the ground that the Cape Government was without the means to administer the territory and preserve order, that the protectorate should be placed under the direct control of the Crown, and completed his arrangements to march a force of 10,000 men into Bechuanaland to hold the country and chastise disorderly Boers.

The Warren Expedition.—Maj.-Gen. Sir Charles Warren was appointed to lead the expedition into Bechuanaland, which was brought under the direct administration of the Crown, "to remove the filibusters from Bechuanaland, to restore order in the territory, to reinstate the natives on their lands, to take such measures as may be necessary to prevent further depredation, and, finally, to hold the country until its further destination is known." A part of his force, which consisted entirely of volunteers, was raised in England, and a part in Cape Colony after his arrival there. The English Parliament voted £750,000 for the expedition. As soon as he entered Bechuanaland Gen. Warren proclaimed martial law and assumed the direction of the entire administration of the country. The persons in possession of the farms of Stellaland were friendly to the English, and desirous of annexation to Cape Colony. Those hostile to Great Britain had joined the Goshenites in the north. The latter were not in possession of the farms they claimed in Montsioa's territory. Those who had entered upon the occupancy of the land were most of them afterward driven out by the Baralong. They kept up a form of state organization and issued their edicts from Rooi Grond, on the confines of the Transvaal, whence raids were conducted against the Bechuanas. The British were prepared to recognize the titles of the Stellaland farms, which were in effective possession, many of them acquired by purchase, and a considerable proportion owned by English or Anglo-Dutch people; hence the willingness of these burghers to accept British rule. The Goshen Republic it was intended to suppress, and to cancel all land-titles in that district. The Stellalanders agreed through their constituted authorities to offer no impediment to the passage of troops through Stellaland to Goshen. In the autumn of 1884, Mr. Van Niekerk and the other Stellaland leaders urged Sir Hercules Robinson to assume the administration of their district at once, as they were unable to carry on the government, for lack of funds. The Government of the republic managed to contract a debt of £11,000. Sir Charles Warren was well received at Vryburg. He entered into communication with the Transvaal Government, which professed to act in co-operation with him. Within two months an organized force of 1,000 men was collected at Vryburg. The Boer farmers were driven out, and the head of their government, Van Niekerk, was arrested on a charge of murder. The former British agent in Bechuanaland, Mr. Mackenzie, was taken along by Sir Charles Warren as his adviser. A rupture soon occurred between the Deputy High Commissioner and the administrator who succeeded Mackenzie, Mr. Rhodes, the nominee of the Cape Ministry. Mr. Rhodes resigned on account of the arrest of Niekerk. To the protests of Mr. Kruger, the Transvaal representative, on behalf of the Stellaland and Goshen republics, Sir Charles Warren replied: "I do not know what you mean by the government; I only know of a band of robbers who call themselves administrators of a country belonging to the Queen." In the same tone Sir Hercules Robinson replied some time before to representatives of the Transvaal authorities, who sought to have the new republics included in the terms of the convention of 1884: "If the British Government were to amend the convention in consequence of the unprincipled action of freebooters, which the Transvaal Government have taken no pains to prevent, we should be making ourselves consenting parties to the grievous wrong which has been inflicted on our allies Montsioa and Mankaroane, and offer an encouragement to the recurrence of such disgraceful proceedings in the future. Once let it be seen that Transvaal subjects can, unchecked by their own Government, plunder the natives across the Transvaal border of their lands, and, having done so, then secure by annexation salable titles for their stolen farms as well as the other advantages of a settled form of government, then freebooting will become a trade and a precedent, the effect of which will not be limited to the four Bechuanaland chiefs whose cases are now under consideration." The Cape Premier, Mr. Upington, pleaded the case of the volunteers of Massouw and Moshette in public speeches, describing them as "mercenary soldiers" such as the English had often employed in their own wars.

The Trial of Niekerk.—The arrest as a common murderer of the head of the Stellaland Republic, who had been recognized as such by Mr. Mackenzie as well as Mr. Rhodes, created a great excitement throughout South Africa. Taken in conjunction with other acts of the Deputy High Commissioner, it was supposed to indicate a policy strongly antagonistic to the Dutch and hostile to their interests. Mr. Niekerk and Commandant Celliers were brought to trial for the murder of James Honey, an Englishman. Honey had been charged, in a proclamation, with treason, cattle-stealing, and other crimes, and warned not to re-enter Stellaland on pain of death. He braved this proclamation of the head of the Government, and was arrested and taken into the Transvaal for trial. The Transvaal court refused to try the case, on the ground of want of jurisdiction. On the way back he was shot by his conductors, in February, 1883. During the trial of Niekerk the two guards were found, and one of them turned state's evidence. Arrests were made of persons to be tried by the same tribunal, composed of military officers, on the charge of the murder of Bethell and Walker, Englishmen killed in the war against Montsioa and Mankaroane; Mr. Walker, an efficient frontier soldier, under circumstances indicating that he was shot after being wounded. At this point Mr. Upington persuaded the High Commissioner to put a stop to these summary trials. Sir Hercules Robinson accordingly ordered the proceedings to be stayed.

The English commander was suspicious of the Transvaal Boers, and governed his movements with reference to a flanking attack. To guard against this eventuality, he took a much larger force than was necessary to cope with the Bechuanaland settlers alone, and established fortified posts and telegraph communications along the line of march. The Transvaal authorities were not less suspicious of the English, and believed that the object of so large an expedition must be to invade the republic and hoist the British flag at Pretoria and Bloemfontein. They sent a large force to the frontier, on the pretext of depredations committed by the natives. The provoking course of action taken by the Special Commissioner—in employing Mr. Mackenzie in face of the protest of the Cape Government, in sending for Mr. Fry, an official publicly dismissed by the Cape Government, to act as his legal and financial adviser, in arresting Van Niekerk, in dismissing Mr. Rhodes, in enrolling and equipping a black regiment, etc.—strengthened these apprehensions, notwithstanding the friendly assurances of Sir Hercules Robinson. Sir Charles Warren's course created great excitement and alarm throughout South Africa. Sir Hercules Robinson, in his capacity of High Commissioner, exerted his authority to arrest the irritating and dangerous course of the Special Commissioner, but the latter refused to be guided by the Governor of Cape Colony. The home authorities were then called upon to decide upon the conflict of authority. Lord Derby expressed general concurrence with Sir Hercules Robinson, and directed Sir C. Warren to refer questions of civil policy to the High Commissioner, whenever practicable, and to observe special precaution in matters affecting the susceptibilities of the Dutch population. Sir Charles Warren protested against this decision, and practically disobeyed it. All his arrangements with the native chiefs were made on the basis of a perpetual imperial administration, and the exclusion of the Dutch from Bechuanaland. This was in accordance with a new development of the imperialistic policy that found favor with certain sections of Liberal opinion in England, represented by Mr. Forster, the Aborigines Protection Society, and the anti-Dutch of both parties, and with the English party in South Africa, moved both by sentiment and interest. The establishment of German settlements in South Africa, and manifestations of German sympathy for the Dutch race in South Africa, quickened the sentiment in favor of a vigorous South African policy that was a heritage of the Transvaal war. The financial exigencies of the Cape Government necessitated the transfer of the responsibility for Basutoland, Pondoland, and other native districts to the Imperial Government. At the same time the establishment of a German colony on the coast impelled the British Government to extend its jurisdiction over Bechuanaland and other native districts. The friends of a vigorous policy proposed to maintain permanently all these native districts, enlacing the Boer republics and Cape Colony, as Crown colonies, to be governed according to English ideas, and settled, if possible, by British colonists. Cape Colony had originally resigned the task of establishing the protectorate of Bechuanaland, because the home Government required the expulsion of the Boer settlers and the carrying out of its views of native policy. After the pacification of the country through the mere presence of Sir Charles Warren's irregular troops, Sir Hercules Robinson again offered on behalf of the Cape Government to assume the administration and furnish the small body of police that was necessary to preserve order. Shortly before retiring from office, the Liberal Government in England intimated their willingness to transfer the administration to the Cape authorities, and informed Gen. Warren that the volunteer force must be disbanded at the end of the six-months term of enlistment and the heavy expenditures stopped. In answer to his proposal to investigate Stellaland titles, Lord Derby instructed him that the titles must be generally recognized and upheld, and the Rhodes agreement maintained.

When Sir Charles Warren started onward from Vryburg, the defiant burghers of Goshen became suddenly quiet, and the bands that threatened resistance disappeared in the Transvaal. When the troops entered Rooi Grond the representatives of the republic of Goshen had vanished, and no protest was raised to the declaration of British sovereignty.

The expedition proceeded northward to visit the three Bechuana chiefs who had not yet appealed to British protection. They were eager for a protectorate, and were willing to sacrifice the best part of their land to secure English rule, but begged to be preserved from the control of the Colonial Government. The conditions they made were that they should be protected from white land-grabbers, robbers, and murderers, that gold-diggers should not be free to overrun the country, that rum should not be imported, and that their native laws should remain in force. The troops opened up a good road all the way to Shoshong, with a telegraph line and convenient watering-places. When they reached Sechele's town, that chief expressed doubts of the efficacy of English protection, and told the Special Commissioner to go and restore to Mankaroane and Montsioa their lands, and then talk to him.

The general reached Shoshong May 12th.

The great chief Khame, who claimed that his territory extended to the Zambesi, offered to cede all his land, except a portion reserved for his people, to the British Government on condition that it should be colonized by English settlers. The London authorities concluded not to accept this offer, which came up for consideration after the change of government.

The agreement made with the chiefs was that in return for the protection of their rights in their remaining lands, they should grant to the British Government 70,000 square miles of land in the most fertile districts, about one half of the entire area of Bechuanaland. They stipulated that this land should be held forever as a Crown domain and settled by Englishmen to the exclusion of the Dutch, and only such persons as are approved by themselves as well as by the British authorities. Sir Charles Warren accepted the gift as affording the means of effecting a permanent settlement and preserving order, without further cost to the Imperial Government. The lands were sufficient to provide 7,000 farms of 6,000 acres each. Settling upon these men of English race or in sympathy with English methods of colonization, would render the blacks safe from seizure of all their lands by the Afrikanders, and the promise of protection would be kept. It was proposed to rent the farms at £9 each per annum. The dominant party in the Cape Parliament, however, objected loudly to a settlement that raised invidious distinctions of race and politics and shut out the Afrikanders from the new dependency. In accordance with the request of nearly all the chiefs, Sir Charles Warren recommended the prohibition of the sale of intoxicating liquors. He presented a complete plan for the organization of the new territory. In order to deprive the Cape Government and the Dutch of all control or influence in this and the other large sections of South Africa recently brought under the immediate direction of the Crown, he followed the suggestion of the extreme anti-Dutch faction in South Africa, and their English supporters, in proposing that the office of High Commissioner for South Africa should be separated from that of Governor of Cape Colony. The government proposed for Bechuanaland was to consist of a Lieutenant-Governor, under the High Commissioner, and a Legislative Council, partly official and partly elective. South of the Molopo the colonial laws were to be applicable. The budget of receipts was estimated at £63,000, derivable from Cape customs, an imperial contribution, a police allowance, the land receipts, the hut-tax, and stamps. The estimated expenditures, taken at £62,000, provided for the official establishments, with five magistracies, judicial, legislative, and hospital expenses, police, telegraphs, and interest on a loan for public works.

Sir Charles Warren's Recall.—The Conservative ministers were less inclined than the Liberals had been to embark in the ambitious enterprise urged by Sir Charles Warren, who was himself spoken of by imperialistic enthusiasts for the position of High Commissioner for all South Africa outside of Cape Colony and Natal. The scheme of Crown administration would consume at least £100,000 a month for Bechuanaland alone if a large military force had to be maintained. The divergence between the High and the Special Commissioners continued. The troops were disbanded and replaced by a frontier police. Nothing occurred to disturb the peace and security of the country. The land question remained to be settled for Stellaland, and subsequently the claims for farms in the Land of Goshen to be considered. Sir Charles Warren asserted that the Rhodes agreement could not be carried out without breaking the pledges given to Montsioa, Moshette, and Mankaroane, because, according to his maps, there were more titles on the register than there were farms in the district. To avoid the precipitation of fresh troubles with the finally tranquillized "filibusters," the land question was taken out of the hands of the energetic Special Commissioner and intrusted to a land commission presided over by Judge Shippard, of Cape Town. Before the 1st of September, Sir Charles Warren was recalled, with expressions of praise and satisfaction.

BELGIUM, a kingdom in western Europe. The legislative power resides in the Chamber of Representatives and the Senate, both elective. The representatives are elected for four, the senators for eight years, one half retiring every two and four years respectively. The tax-paying qualification admits to the franchise only about one thirteenth of the adult male population. The neutrality and inviolability of Belgium are guaranteed by the great powers. The King of the Belgians is Leopold II, born April 9, 1835, who succeeded his father, Leopold I, Dec. 10, 1865.

The present Council of Ministers, constituted Oct. 26, 1884, is composed as follows: President and Minister of Finance, M. Bernaert; Minister of the Interior and of Public Instruction, M. Thonissen; Minister of War, Gen. Pontus; Minister of Railways, Posts, and Telegraphs, M. J. Van den Beereboom; Minister of Foreign Affairs, Prince de Caraman-Chimay; Minister of Agriculture, Industry, and Public Works, M. Chevalier de Moreau.

Area and Population.—The area of Belgium is 11,373 square miles. The estimated population in the beginning of 1883 was 5,655,197, comprising 2,825,722 males and 2,829,475 females. The average density of population is 497 per square mile. About one half of the population speak Flemish and the other half French, with a small proportion of German-speaking inhabitants. In the census reports 244,308 persons are returned as employed in mining and metal industries, 236,744 in agriculture, 64,996 in stock-raising, 406,899 in mixed industries, 244,247 in commerce, 649,156 in the professions and official occupations, 913,841 in various occupations and independent, and 2,834,985 without profession or condition. The land is divided up into very small parcels; in 1882 there were 1,160,149 individual owners. About 800,000 persons are engaged in the various agricultural pursuits.

The number of marriages in 1882 was 39,214, of births 176,345, of deaths 114,298, natural increment 62,047. Of the births 8·1 per cent. were illegitimate. There is a yearly excess of immigration, which in 1882 was 1,852.

The population of the principal cities in 1883 was as follows: Brussels, 389,782; Antwerp, 180,447; Ghent, 136,234; Liége, 129,206.

Nearly the whole of the population belongs to the Roman Catholic Church. At the last census there were 1,559 convents, 213 with 4,027 male inmates, and 1,346 with 20,645 female inmates. Every commune is obliged to maintain a school for elementary public education, one third of the expense being divided between the Government and the province, and the remainder defrayed by the commune. In 1880 the proportion of totally illiterate persons over fifteen years of age was 32 per cent., but between seven and fifteen years of age only 29·4 per cent.

Commerce and Industry.—The special commerce in 1882 was valued at 1,607,600,000 francs of imports and 1,325,900,000 francs of exports. The principal imports were cereals of the value of 385,089,000 francs; wool, 125,170,000 francs; flax and hemp, 88,712,000 francs; metals and minerals, 70,236,000 francs; hides, 64,554,000 francs; timber, 52,882,000 francs; oil-seeds, 44,577,000 francs; live animals, 43,390,000 francs; cotton, 42,195,000 francs; petroleum, 38,682,000 francs; coffee, 38,315,000 francs; all others, 613,798,000 francs. The largest exports were cereals, of the value of 134,015,000 francs; coal, 84,564,000 francs; woolen and cotton goods, 83,736,000 francs; machinery, 77,386,000 francs; linen yarn, 69,677,000 francs; wrought-iron, 68,099,000 francs; stone, 62,092,000 francs; glass, 52,915,000 francs; flax and hemp, 52,583,000 francs; woolen yarns, 41,961,000 francs; hides, 40,489,000 francs; raw sugar, 33,993,000 francs; raw zinc, 31,939,000 francs; all other exports, 490,451,000 francs.

The value of the merchandise imported from France was 317,592,000 francs; from Germany, 242,893,000 francs; from the Netherlands, 238,113,000 francs; from Great Britain, 198,219,000 francs; from the United States, 185,343,000 francs; from Russia, 138,677,000 francs. The value of the exports to France was 441,368,000 francs; to Great Britain, 261,908,000 francs; to Germany, 226,868,000 francs; to the Netherlands, 162,692,000 francs; to the United States, 44,677,000 francs.

About one third of the area of Belgium is devoted to grain cultivation. The imports of cereals in 1882 were in quantity 1,315,064 tons, the exports 522,668 tons. The beet-root is extensively cultivated. The sugar export exceeded the import in 1882 by 50,385 tons. The product of the coal-mines in 1882 was 17,590,989 tons, of which one third was exported, chiefly to France. The quantity of pig and wrought iron produced, mostly from imported ore, was 1,563,977 tons.

During nine months of 1883 there were exported to the United States window-glass of the value of 7,957,136 francs, manufactures of steel of the value of 3,230,649 francs, raw hides of the value of 1,673,119 francs, iron manufactures of the value of 1,181,089 francs, and plate-glass, arms, machines, silk goods, zinc, and clothes of over 500,000 francs in value each. The chief imports from the United States during the same period were wheat of the value of 51,745,945 francs, rye of the value of 5,745,945 francs, corn and oats of the value of 1,979,593 francs, cotton of the value of 17,893,686 francs, crude petroleum of the value of 16,453,000 and refined of the value of 1,020,531 francs, tobacco of the value of 12,331,430 francs, meat of the value of 9,264,307 francs, lard and grease of the value of 8,387,576 francs, and flour of the value of 4,948,983 francs.

Navigation.—The merchant navy in the beginning of 1883 consisted of 46 steamers, of 75,879 tons, and 16 sailing-vessels, of 6,750 tons. In 1883 the tonnage entered at Belgian ports was 4,278,723, not quite one fifth of which was Belgian and about three fifths British.

The Post-Office.—The number of private letters forwarded in 1883 was 86,429,304; official letters, 13,189,700; postal-cards, 23,270,582; packets, 46,570,000; newspapers, 91,319,000. The receipts were 13,345,313 francs; expenditures, 8,288,536 francs.

Telegraphs.—The number of messages in 1883 was 7,039,368. The length of lines 3,713, of wires 16,830 miles. The receipts amounted to 2,654,499 francs; expenses, 3,461,670 francs.

Railroads.—The length of lines worked by the state was 1,915, by companies 785 miles at the end of 1883. The gross receipts in 1883 were 162,069,150 francs, the expenses 95,201,828 francs.

The Army.—The army is recruited partly by conscription, to which every able-bodied man is liable at the completion of his nineteenth year, and partly by enlistment. The period of service is eight years, but furloughs are usually granted for two thirds of the period. The effective strength provided for in the budget of 1885 is 3,052 officers and 44,720 men, with 9,000 horses and 204 guns. The total strength on the war footing is 103,860 men, besides the civic guard of 32,108 men, and the gendarmerie, numbering 2,004 men.

Finance.—In the budget for 1885 the revenue is estimated at 327,025,274 francs, including 5,159,884 francs of extraordinary receipts, and the expenditure at 374,880,424 francs, including extraordinary disbursements amounting to 44,974,750 francs. Of the 321,865,390 francs of ordinary revenue, 23,429,400 francs are set down as derived from land-taxes, 18,623,000 francs from personal taxes, 7,058,000 francs from trade-licenses, 26,597,000 francs from customs, 40,162,800 francs from excise duties, 19,040,000 francs from succession duties, 22,300,000 francs from registration duties, 6,000,000 francs from stamps, 122,500,000 francs from railways, 3,000,000 francs from telegraphs, 8,707,150 francs from the post-office, and the rest from domains and forests, navigation dues, mines, and other sources. Of the 329,905,674 francs at which the ordinary expenditures are estimated, 104,001,559 francs are assigned to interest on the public debt, 4,748,675 francs to the civil list and dotations, 15,488,211 francs to the Department of Justice, 2,363,210 francs to foreign affairs, 22,535,155 francs to the Interior Department, 21,710,961 francs to public instruction, 91,961,588 francs to the administration of public works, 46,063,800 francs to the War Department, 15,856,015 francs to the administration of the finances, 3,490,000 francs to the gendarmerie, and 1,686,500 francs to miscellaneous expenses. There have been almost constant deficits in the ordinary budgets in recent years. In each of the two preceding budgets the estimated excess of expenditures was in the neighborhood of 25,000,000 francs.

The public debt in 1884 amounted to 2,130,411,115 francs, of which 219,959,632 francs of the old 2½ per cent. debt and 746,712,582 francs of 4 per cent. loans issued between 1871 and 1879 represent the share of Belgium in the debt contracted before separation from the Netherlands in 1832; 519,859,000 francs are 3 per cent. bonds of 1873 to 1882, 134,719,000 francs a 4 per cent. loan issued in 1880, 164,796,000 one issued in 1883, 334,064,266 francs 4½ per cent. railroad annuities, and the remainder various annuities. Treasury bonds issued in 1882 at 4 per cent. constitute a floating debt of 60,800,000 francs. The debt constitutes a burden of 375 francs per head of the population, but the railroad revenue alone covers the interest and amortization.

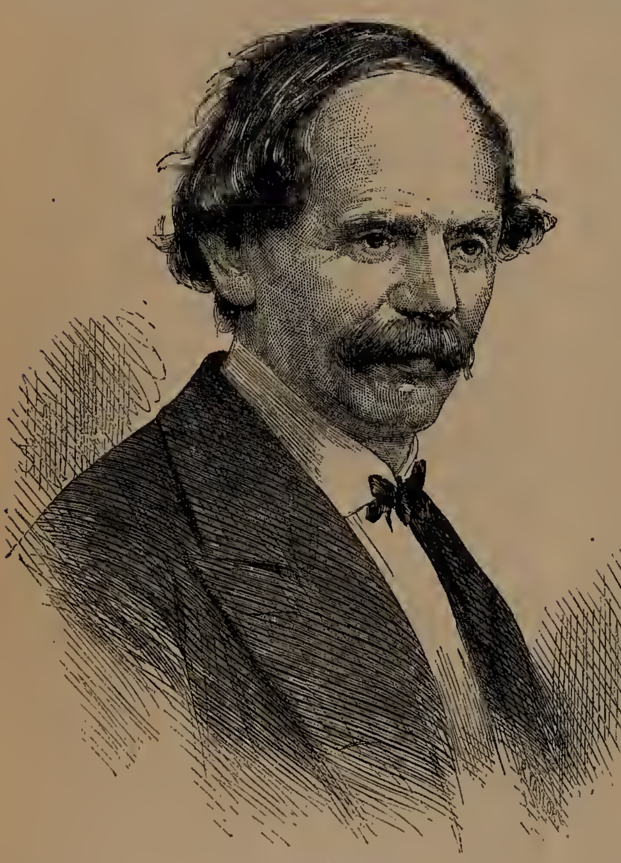
Legislation.—An act raising the import duty on foreign sugar 5 per cent. and imposing a duty of forty-five francs on cocoa was passed in the beginning of May. The sur-tax on sugar was increased in July from 10 to 15 per cent. A change in the electoral law was enacted in August, the effect of which was to extend the franchise in the rural districts and thereby augment the clerical vote. Leaseholders and occupiers of rented premises were admitted to suffrage on the land-tax census. Another provision, curtailing the liberal vote, counts salaries only, and not percentages, as the incomes of salesmen.

The Congo.—In the early part of the year there was rejoicing in Belgium over the results of the Congo Conference and the founding of the new state (see Congo State), mingled with some misgivings at the assumption of the title of sovereign of the state he had created, by King Leopold. To the school already established for the instruction of missionaries to the Congo was added a new African seminary connected with the University of Louvain. Émile de Laveleye elaborated a project for a Congo railroad. An enabling act permitting the King to become the head of the Congo State was passed by the Chamber April 29, and by the Senate the following day. The authorization was limited to King Leopold, and does not devolve on his successors in the dynasty. The bill contained the reservation that the connection between Belgium and the new Congo State is of an exclusively personal nature, involving no national responsibilities of a political or financial character. The acceptance of the sovereignty of the Free State of the Congo was announced by King Leopold in August.

Industrial Exposition at Antwerp.—An international exhibition was opened at Antwerp May 1. The exhibition-grounds were 230 acres in extent; the number of exhibitors was 1,200. The United States was scantily represented. Canada displayed the resources of her vast unpeopled territories. The French exhibit was the finest and best ordered and much the largest. German industries were well represented. Russia exhibited all the products of her anxiously fostered industries, and the many beautiful natural products and the gorgeous artistic handiwork of Muscovy. Italy had a brilliant display of her art-work and of her manifold commercial commodities. The Austrian exhibit was large and fine, and those of Switzerland, Sweden and Norway, Spain, and Brazil comparatively so. The great hall for metals and machinery was the chief glory of the exhibition. The German exhibition of machines was the most varied. The Belgian exhibit of motors and the steam-driven tools for a multitudinous variety of purposes from France were the most interesting features. In electric lighting American inventors took the lead; in sugar-manufacture and chemical industries the Germans.

International Congresses.—A succession of scientific and technical conventions took place in Brussels during the year. A congress of railroad officials from all countries met at Brussels in August, on the fiftieth anniversary of the opening of the first railroad on the Continent, the one running from Brussels to Mechlin. An international congress to discuss internal navigation assembled at Brussels in May. In September the Institut de Droit International held its sessions. One of the prominent subjects discussed was that of international marriages. The Institut adopted resolutions recommending that a marriage celebrated in due form should not be assailable in other countries because their legal forms are different; that diplomatic and consular authorities should be empowered to perform the formalities of civil marriage; and that foreigners may be married in countries where religious marriage is required, if they belong to a different religion, according to the legal forms of their own country. With regard to conflicts of maritime law it was recommended that the law of the flag should rule, rather than the territorial law or the law of the country where the contract was made. A report was adopted suggesting that every government should publish promptly treaties made with other powers. A conference upon commercial law was held later in Antwerp.

BENEDICT, Sir JULIUS, a musician and composer, born in Stuttgart, Nov. 27, 1804; died in London, June 5, 1885. He exhibited musical talent at a very early age, and studied under Hummel at Weimar. At the age of sixteen he made the acquaintance of Weber, who was so pleased with his musical promise that he set aside his rule not to take pupils, and for four years taught him and treated him as a son. In 1823 Benedict became the leader of the Vienna Opera; afterward he conducted the orchestra in the San Carlo at Naples; in 1835 he went to Paris, where he won the friendship of Meyerbeer, Rossini, Auber, Donizetti, Berlioz, and Malibran; and a year later he settled in London. He was at first connected with the Lyceum Theatre, and afterward was musical director at Drury Lane. The musical festivals at Norwich and the London Monday concerts and Liverpool Harmonic were for many years led by him. He became known to Americans when he accompanied Jenny Lind to this country in 1850 as conductor and pianist. On returning to England, he formed a choral society and conducted Italian opera in London. His most noted operas are "The Gypsy's Warning," "The Brides of Venice," "The Crusaders," and "The Lily of Killarney." The libretto of the last named was written by Dion Boucicault and John Oxenford; it was brought out in 1862, and became popular in Germany as well as in Great Britain. His other works include the cantatas, "Richard Cœur de Lion," "Undine," "St. Cecilia," and "Graziella," and the operettas "Un Anno ed un Giorno" and "The Bride of Song," and the oratorio of "St. Peter." In 1860 he wrote the recitatives for Weber's "Oberon." He also wrote a large amount of miscellaneous music, and monographs on Weber and Mendelssohn. He was active almost to the time of his death, and was to have conducted his fifty-first annual concert on the 17th of June. He was knighted in 1871, and received numerous decorations from Continental sovereigns.



SIR JULIUS BENEDICT.

BIBLE, REVISION OF THE ENGLISH VERSION OF. Among the signal events of our time is the revision, just finished, of the authorized version of the English Scriptures. It was a work which, however desirable it might be deemed by individuals, seemed, until very recently, not likely to be speedily accomplished. So widely spread and deeply rooted was the reverence for our recognized version, so transcendent were its acknowledged merits, that even the partial disturbance of time-hallowed associations, which would be involved in the most conservative revision, seemed likely to be resisted by an overwhelming public sentiment. We shall trace briefly the steps by which a movement so unlooked-for and so important has been brought about, and the earnest desire of many become an accomplished fact.

The first translation of the Scriptures into English was made by John Wycliffe, the English martyr, and was finished about the year 1380. It was made, not from the original tongues, but from the Latin Vulgate, whose errors, therefore, it must necessarily perpetuate. Wycliffe was assisted in his work by Nicolas of Hereford, a pious and learned monk, and to these two men is due the inestimable service of putting an English Bible into the hands of an English-speaking people.

About a century later, in 1480, William Tyndale began the translation of the New Testament into English from the original Greek. His open hostility to Rome drew on him persecution, which compelled him to carry on his work out of England. The first edition of his New Testament was printed in 1525, probably at Cologne. He had translated also, from the Old Testament, the Pentateuch and the book of Job, when the persecution that had driven him from Oxford and from England culminated in demanding his death. Tyndale is virtually the pioneer of English Biblical translation. His scholarship, fidelity, and courage combined to bring upon his name lasting honor. The great value of his work is proved by the fact that all succeeding versions, including that of King James, were based upon and largely drawn from it. These successive versions—named often from some special incident of translation or publication—may in fact be regarded as but a series of revisions. Coverdale's, indeed, published in 1535, has the distinction of attaining that completeness which Tyndale's work failed of through his martyrdom. Matthew's Bible (a *nom de plume* for John Rogers) followed in 1537; Cranmer's (or the "Great Bible") in 1539; the Genevan in 1557–'60; and the Bishop's Bible in 1568. All of these were revisions, sometimes but slightly modified, of Tyndale, who thus stands the coryphæus in English Biblical translation, his work, in its time, ranking among the great works of the greatest reformers, and, in its quality, judged by the highest modern standards, a model of simplicity and beauty. All these had prepared the way for the work that was to constitute an epoch in the history of the English Bible, which appeared in 1611 under the auspices of King James I. Uniting the labors of forty men, it was made with a care befitting the greatness of the undertaking, and, as the "Authorized Version," has for more than two hundred and fifty years held its place as the accepted Bible of the English-speaking race. Its high excellences, however, were not unattended by many imperfections, due alike to the unsettled state of the original text and the infancy of critical and exegetical scholarship, to the lack of a clear conception of the exact functions of translation, to the unsettled and fluctuating condition of our language, and finally to a failure properly to adjust and harmonize the work of the different translators—imperfections which only time, a maturer scholarship, and riper taste could remove. Yet, in spite of defects, the work appealed alike to the intellect of the scholar and to the hearts of the people. It rapidly supplanted all earlier versions, and has continued, with no rival claimant, in public and private use among English Protestants until the appearance of the revision just completed in 1881 and 1885.

For this result the times, especially during the last quarter of a century, have been rapidly ripening. Critical scholarship has been settling the sacred text with unhoped-for rapidity; grammatical and exegetical labors have been clearing up its meaning; and naturally a growing desire has been felt that our excellent version should receive the benefit of this progress, in the removal of errors and obscurities, and the bringing of the whole up to the level of our best modern scholarship. The year 1856 was signalized by distinct movements looking to this end. There were introduced both into the Convocation of Canterbury and into Parliament proposals to petition the sovereign for the appointment of a royal commission for "receiving and suggesting amendments in the authorized version of the Bible." The result, indeed, proved that neither the clerical nor the lay mind was yet prepared for a step of such grave importance. Yet private enterprise had more successful results. An appeal was made by the Rev. Ernest Hawkins, Secretary of the Society for the Propagation of the Gospel, to some excellent scholars; and five clergymen—Henry Alford, C. J. Ellicott, John Barrow, W. H. G. Humphrey, and G. Moberly—met at his request for a tentative effort in revision. They published successively revisions of the Gospel of John, of the Epistle to the Romans, of those to the Corinthians, and of those to the Galatians, Ephesians, Philippians, and Colossians, with scholarly prefaces explaining the principles and difficulties of the work. These small volumes introduced the subject to the public under very favorable auspices. They gave practical proof how scholarly accuracy and thoroughness might be united with the most reverent conservatism, and thus at once stimulated hope and allayed prejudice. The work was warmly commended, passed through several editions, and, as a familiar book in the hands of Biblical students, aided to prepare the public mind for a general and decisive movement.

In America, meanwhile, the publications of the American Bible Union, organized in 1853, were giving expression to the popular feeling of the need of Biblical revision. Some of its tentative publications were indeed unfortunate, scarcely evincing an adequate sense of the delicacy and responsibility of the work; but others, from distinguished scholars like Drs. Conant and Hackett, were of unquestionable and acknowledged excellence.

In 1859 Archbishop Trench published a small but important work "On the authorized version of the New Testament in Connection with some Recent Proposals for its Revision." This aided to prepare the way, and formed an introduction to the like later works of Bishop Ellicott in 1870 and Prof. Lightfoot in 1871; these latter, indeed, accompanying the formal opening of the revision movement, but naturally adding force to the current that alike in the Establishment and the dissenting churches, was setting powerfully in its favor. These three works of Trench, Ellicott, and Lightfoot were published together in New York in 1873, under the editorship of Dr. Philip Schaff, and may now be consulted with much profit by students of the original New Testament Scriptures. From 1857 to 1869 no formal steps were taken in the direction of revision. But the exegetical study of the Scriptures was pursued with great diligence, and the critical labors of scholars like Tregelles and Scrivener, and especially of the German Tischendorf, were bringing near the time, a little while before apparently so remote, for educing order out of the chaos of New-Testament various readings, and were making the speedy formation of a substantially reliable Greek text an object of reasonable hope.

About the year 1869 matters seemed ripe for action. Dean Alford and Bishop Ellicott, unwearied in their devotion to Biblical (and especially New Testament) studies, procuring the efficient support of Bishop Wilberforce, took measures to inaugurate the work. There was doubt at first about the best mode of proceeding. They contemplated procuring a royal commission, in accordance with the precedent substantially furnished by the revision of 1611, a measure which it was especially hoped would obviate the difficulty naturally attending the selection of the members of the revising body. For various reasons this plan was abandoned, and it was decided to be most fitting to bring the subject before the church in whose bosom the existing version had been born and nurtured. Accordingly, on Feb. 10, 1870, the Bishop of Winchester (Wilberforce) moved, and the Bishop of Gloucester and Bristol (Ellicott) seconded, in the Convocation of Canterbury, the following resolution:

> That a committee of both houses be appointed, with power to confer with any committee that may be appointed by the Convocation of the Northern Province, to report upon the desirableness of a revision of the Authorized Version of the New Testament, whether by marginal notes or otherwise, in all those passages where plain and clear errors, whether in the Greek text originally adopted by the translators, or in the translation made from the same, shall on due investigation be found to exist.

The resolution was afterward extended to the Old Testament, and passed with substantial unanimity. It was reported to, and concurred in by, the Lower House, and a joint committee of the two bodies met March 24, 1870, and drew up, as their report, the following resolutions:

> 1. That it is desirable that a revision of the Authorized Version of the Holy Scriptures be undertaken.
> 2. That the revision be so conducted as to comprise both marginal renderings and such emendations as it may be found necessary to insert in the text of the Authorized Version.
> 3. That in the above resolutions we do not contemplate any new translation of the Bible, or any alteration of the language, except where, in the judgment of the most competent scholars, such change is necessary.
> 4. That, in such necessary changes, the style of the language employed in the existing version be closely followed.
> 5. That it is desirable that Convocation should nominate a body of its own members to undertake the work of revision, who shall be at liberty to invite the co-operation of any eminent for scholarship, to whatever nation or religious body they may belong.

The subject, in the mean time, had been discussed in the Convocation of York, but had failed to meet the concurrence of that body, of which, however, individual members gave it their cordial co-operation.

In May following the report was presented, and a committee was appointed from the Upper and Lower Houses to consider and report a plan of revision on the principles above laid down, and was authorized to invite the co-operation of distinguished Biblical scholars outside of the Establishment. This committee at once divided itself into two companies for the Old and New Testaments respectively, completed the list of working members by careful selections from the dissenting religious bodies, and drew up the general and special rules that were to guide their labors. The two companies met in June, 1870, in the Deanery of Westminster, and held their sessions four days every month. The New Testament Company held its meetings in the Jerusalem Chamber (where the Westminster Assembly had met), and was presided over by Bishop Ellicott, who held the chairmanship during the ten and a half years of its existence. The Rev. J. Troutbeck, one of the minor canons of Westminster, was the secretary. Arrangements were made with the officials of the Oxford and Cambridge University presses, by which they received the exclusive right of publishing the completed revision, and met all its necessary expenses. Everything now proceeded smoothly and with due rapidity. The list of members embraced a large number of those who, both in and out of the Establishment, were reputed among the most eminent in the kingdom for Biblical scholarship. Their mode of proceeding—which was to discuss freely and thoroughly, while seated around a table, the questions of criticism and translation that had been separately considered during the intervals of the meetings, and decide by a majority vote—insured in the main a satisfactory result. There would of course be cases in which the law of *ponderare non numerare* would have been preferable. The final vote was made still more conservative by the requisition of a majority of two thirds for any change from the old version. No existing Greek text was adopted as a standard. With critical scholars like Tregelles, Westcott, Hort, and Scrivener, either present or accessible, they could safely determine the text for themselves. Tregelles, indeed, was never able, from illness, to attend the meetings, and Dean Alford was early withdrawn by death from the work to which his heart and life had been given. But a long list of distinguished names in the two companies—taken in connection with their remarkable punctuality in attendance—guarantees the fidelity and ability with which their work was prosecuted. The following names comprise the entire British committee of revision, as finally constituted, excluding those who declined or died, and including the *ex-officio* members:

OLD-TESTAMENT COMPANY.

The Right Rev. the Bishop of BATH and WELLS, Palace, Wells, Somerset.
The Right Rev. the Bishop of ELY, Palace, Ely.
The Right Rev. the Bishop of LLANDAFF, Bishop's Court, Llandaff.

The Right Rev. the Bishop of St. David's (Chairman), Abergwili Palace, Carmarthen.
The Very Rev. the Dean of Canterbury, Deanery, Canterbury.
The Ven. Archdeacon Harrison, Canterbury.
The Ven. Archdeacon Rose, Houghton Conquest, Ampthill.
The Rev. Canon Selwyn, Cambridge.
The Rev. Dr. Kay, Great Leighs, Chelmsford.
The Rev. Dr. Alexander, Edinburgh.
R. L. Bensly, Esq., University Library, Cambridge.
Professor Chenery, Reform Club, London.
The Rev. Professor Davidson, Edinburgh.
The Rev. Dr. Davies, Baptist College, Regent's Park, London.
The Rev. Dr. Douglas, Glasgow.
The Rev. Principal Fairbairn, Glasgow.
The Rev. F. Field, Heigham, Norwich.
The Rev. J. D. Geden, Wesleyan College, Manchester.
The Rev. Dr. Ginsburg, Holm Lea, Binfield, Bracknell, Berks.
The Rev. Dr. Gotch, Baptist College, Bristol.
The Rev. Professor Leathes, King's College, London.
The Rev. Canon Perowne, Trinity College, Cambridge.
The Rev. Professor Plumptre, Pluckley, Ashford.
The Rev. Professor Weir, University, Glasgow.
W. Aldis Wright, Esq. (Secretary), Trinity College, Cambridge.

NEW-TESTAMENT COMPANY.

The Right Rev. the Bishop of Winchester, Winchester House, London.
The Right Rev. the Bishop of Gloucester and Bristol (Chairman), Palace, Gloucester.
The Right Rev. the Bishop of Salisbury, Palace, Salisbury.
The Very Rev. the Dean of Westminster, Deanery, Westminster.
The Very Rev. Dr. Scott, Dean of Rochester, Rochester.
The Ven. the Prolocutor, The Prebendal, Aylesbury.
The Rev. Canon Blakesley, Vicarage, Ware.
The Most Rev. the Archbishop of Dublin, Palace, Dublin.
The Right Rev. the Bishop of St. Andrew's, The Feu House, Perth.
The Rev. Dr. Angus, Baptist College, Regent's Park, London.
The Rev. Dr. David Brown, Free Church College, Aberdeen.
The Rev. Professor Eadie, Glasgow.
The Rev. F. J. A. Hort, Cambridge.
The Rev. W. G. Humphry, Vicarage, St. Martin's-in-the-Fields, London.
The Rev. Canon Kennedy, Cambridge.
The Ven. Archdeacon Lee, Dublin.
The Rev. Canon Lightfoot, Trinity College, Cambridge.
The Rev. Professor Milligan, University, Aberdeen.
The Rev. Professor Moulton, Wesleyan College, Richmond, Surrey.
The Rev. Professor Newth, London.
The Rev. Professor Roberts, St. Andrew's.
The Rev. Dr. G. Vance Smith, York.
The Rev. Dr. Scrivener, Gerrans, Grampound.
Dr. Tregelles, Plymouth.
The Rev. Dr. Vaughan, Master of the Temple, London.
The Rev. Canon Westcott, Peterborough.
The Rev. J. Troutbeck (Secretary), Westminster.

The following were the rules adopted for their guidance in the work of revision:

To introduce as few alterations as possible in the text of the Authorized Version consistently with faithfulness.

To limit, as far as possible, the expression of such alterations to the language of the Authorized and earlier English versions.

Each company to go twice over the portion to be revised, once provisionally, the second time finally, and on principles of voting as hereinafter is provided.

That the text to be adopted be that for which the evidence is decidedly preponderating; and that, when the text so adopted differs from that from which the Authorized Version was made, the alteration be indicated in the margin.

To make or retain no change in the text on the second final revision by each company, except *two thirds* of those present approve of the same, but on the first revision to decide by simple majorities.

In every case of proposed alteration that may have given rise to discussion, to defer the voting thereupon till the next meeting whensoever the same shall be required by one third of those present at the meeting, such intended vote to be announced in the notice for the next meeting.

To revise the headings of chapters, pages, paragraphs, italics, and punctuation.

To refer, on the part of each company, when considered desirable, to divines, scholars, and literary men, whether at home or abroad, for their opinions.

That the work of each company be communicated to the other as it is completed, in order that there may be as little deviation from uniformity in language as possible.

That the special or by-rules for each company be as follows: 1. To make all corrections in writing previous to the meeting. 2. To place all the corrections due to textual considerations on the left-hand margin, and all other corrections on the right-hand margin. 3. To transmit to the chairman, in case of being unable to attend, the corrections proposed in the portion agreed upon for consideration.

The revision enterprise had been thus far, alike in its inception and prosecution, confined to Great Britain; but it was for many reasons desirable that the American churches should become connected with the movement. In July, 1870, the committee were authorized by the House of Convocation "to invite the co-operation of some American divines"; and Bishop Wilberforce and Dean Stanley undertook to act for them in opening communication. In August following, Dr. Joseph Angus, President of Regent's Park College, London, one of the British revisers, arrived in New York, with a circular letter from Bishop Ellicott, empowering him to take the requisite steps for forming an American committee of revision. In consultation with Dr. Philip Schaff, who from the first entered with the warmest zeal into the movement, and continued to its close a leading and most efficient supporter, a list of names of American scholars and a draft of rules of co-operation were prepared and submitted to the British committee and substantially approved. It was naturally the wish of the English body that the Episcopal Church in America should take a leading part in the work of revision. To their disappointment, the American House of Bishops declined to commit itself formally to the enterprise, though without restricting the free action of its individual members. About two months after, an invitation was sent to certain scholars to meet in New York, preparatory to forming the requisite organization. They met in December, 1871, Rev. Drs. Schaff, Smith, Green, Hare, Krauth, Conant, Day, and Washburn, and Dr. Abbott being present, and letters of regret being received from others unable to attend. Dean Howson, of Chester, was present by invitation, and much interest was expressed in the movement. In the evening a large meeting of clergymen and laymen was held in Calvary Episcopal church, in furtherance of the work, at which addresses were made by Dean Howson and Dr. Schaff. Owing to the need of providing means for meeting the expenses, and other hindrances, the final organization was delayed until Oct. 4, 1872, when a meeting was held, and the two companies fairly entered on their labors, nearly two years after the work was begun in England. Omitting unnecessary details, we give the *personnel* of the committee as finally constituted. The choice of members had to be determined by the triple consideration of scholarship, the different religious bodies to be represented, and the facility of their reaching New York, the natural place of meeting.

GENERAL OFFICERS OF THE COMMITTEE.

Philip Schaff, D. D., LL. D., President.
George E. Day, D. D., Secretary.

OLD-TESTAMENT COMPANY.

Prof. William Henry Green, D. D., LL. D. (Chairman), Theological Seminary, Princeton, N. J.
Prof. George E. Day, D. D. (Secretary), Divinity School of Yale College, New Haven, Conn.
Prof. Charles A. Aiken, D. D., Theological Seminary, Princeton, N. J.
The Rev. Talbot W. Chambers, D. D., Collegiate Reformed Dutch Church, New York.
Prof. Thomas J. Conant, D. D., Brooklyn, N. Y.
Prof. John DeWitt, D. D., Theological Seminary, New Brunswick, N. J.
Prof. George Emlen Hare, D. D., LL. D., Divinity School, Philadelphia.
Prof. Charles P. Krauth, D. D., LL. D., Vice-Provost of the University of Pennsylvania, Philadelphia.
Prof. Tayler Lewis, LL. D., Union College, Schenectady, N. Y.
Prof. Charles M. Mead, Ph. D., Theological Seminary, Andover, Mass.
Prof. Howard Osgood, D. D., Theological Seminary, Rochester, N. Y.
Prof. Joseph Packard, D. D., Theological Seminary, Alexandria, Va.
Prof. Calvin E. Stowe, D. D., Hartford, Conn.
Prof. James Strong, S. T. D., Theological Seminary, Madison, N. J.
Prof. C. A. Van Dyck, D. D., M. D., Beirut, Syria (Advisory Member on questions of Arabic).

Note.—The American Old-Testament Company lost by death Prof. Tayler Lewis, d. 1877; Dr. Krauth, Philadelphia, d. Jan. 2, 1883; and Dr. Stowe, by resignation.

NEW-TESTAMENT COMPANY.

Ex-President Theodore D. Woolsey, D. D., LL. D. (Chairman), New Haven, Conn.
Prof. J. Henry Thayer, D. D. (Secretary), Theological Seminary, Andover, Mass.
Prof. Ezra Abbot, D. D., LL. D., Divinity School, Harvard University, Cambridge, Mass.
The Rev. Jonathan K. Burr, D. D., Trenton, N. J.
Pres. Thomas Chase, LL. D., Haverford College, Pa.
Chancellor Howard Crosby, D. D., LL. D., New York.
Prof. Timothy Dwight, D. D., Divinity School of Yale College, New Haven, Conn.
Prof. James Hadley, LL. D., Yale College, New Haven, Conn.
Prof. Horatio B. Hackett, D. D., LL. D., Theological Seminary, Rochester, N. Y.
Prof. Charles Hodge, D. D., LL. D., Theological Seminary, Princeton, N. J.
Prof. A. C. Kendrick, D. D., LL. D., University of Rochester, N. Y.
The Right Rev. Alfred Lee, D. D., Bishop of the Diocese of Delaware.
Prof. Matthew B. Riddle, D. D., Theological Seminary, Hartford, Conn.
Prof. Philip Schaff, D. D., LL. D., Union Theological Seminary, New York.
Prof. Charles Short, LL. D. (Secretary), Columbia College, New York.
Prof. Henry Boynton Smith, D. D., LL. D., Union Theological Seminary, New York.
The Rev. Edward A. Washburn, D. D., LL. D., Rector of Calvary Church, New York.

Note.—The American New-Testament Company lost by death Prof. James Hadley, d. 1872; Dr. Henry Boynton Smith (who attended one session, and resigned from ill health), d. 1877; Dr. Horatio B. Hackett, d. 1876; and Dr. Charles Hodge, d. 1878.

The English committee, having had nearly two years the start of the American, were able to furnish to the latter printed portions of their provisional revision, which with the common version and the original text formed the basis and starting-point of its work. The two companies met on the last Friday and Saturday of each month from September to May, in adjoining rooms of the Bible House in New York. A summer meeting of about a week was held in July, usually at New Haven, Andover, or Princeton. The members sat around a table, and, under the guidance of their chairman, discussed freely and fully, verse by verse, the portion assigned for the meeting, which they had had opportunity to examine during the month preceding. Each portion when finished was transmitted in print to the English companies, who made their next examination with the American revision before them, giving to the American suggestions whatever weight they deemed requisite. Their own revision, thus revised, was sent back to the American companies, to be by them re-examined in the light of these results, of which fresh examination—the differences being reduced to a minimum—the results were retransmitted to the English body. The entire Old and New Testaments were thus twice carefully gone over, questions of text, interpretation (so far as this was involved), and translation being severally considered; and, finally, to differences still remaining unadjusted was given a third examination. The work was thus conducted with a patience and thoroughness befitting its transcendently grave character; and, among the numerous criticisms to which it has been subjected on both sides of the Atlantic, few objections have probably been raised that had not received in the revising bodies as full a share of candid and scholarly attention as the critics have bestowed upon them. It may be proper here to say that the discussions (regarding the American companies, we speak from personal knowledge) were conducted with unfailing harmony and good feeling. Sectarian differences were merged in the common sympathies of Christian scholarship, and in a profound conviction of the high ends and wide and enduring interests that the revision was to subserve. If any thought of special denominational interests arose in any mind, it rarely or never found utterance.

To settle the proper relations of the English and American bodies was a matter of considerable delicacy. The English companies, as having originated the enterprise, and having throughout led the way in the revision, as well, perhaps, as on general grounds of historical priority, would naturally claim the right of ultimate decision in disputed cases. On the other hand, so large and respectable a company of American scholars could scarcely be expected to devote so much and long-continued labor to the work in the character of mere unauthoritative advisers. Yet their admission to an entire equality in voting was also hindered by the arrangements the British companies had made with the heads of the University presses, who, in return for the right of exclusive printing, undertook to meet all the expenses of the members; and the difficulty was heightened by the wide local separation of the two revising bodies. The matter was, on the whole, satisfactorily adjusted. The English companies were to give the most careful consideration to the American suggestions; points of difference were to be subjects of mutual discussion; and any differences, finally remaining, which the American companies deemed of sufficient importance, were to be noted in appendixes, affixed to the Old and New Testaments respectively. In accordance with this agreement, such appendixes have been subjoined, embracing some of the chief (though, of course, by no means all) points of American dissent. In probably a large majority of the changes made, the British and American bodies were substantially unanimous. A large part of them would have been made by either body without hesitation. In very many cases the American suggestions were in whole, or with modifications, incorporated into the work, and among these not a few of decided importance. The published work, therefore, gives no certain clew to the relative amount of English and American labor that contributed to its production. The products of English Episcopal and dissenting scholarship, and of the more equal and less sharply distinguished learning of the American church, repose in indistinguishable harmony in the new revision, and make their united appeal to English Christendom.

The revision appears in England under the auspices of the University presses, and is protected by copyright. Efforts were made to effect a like arrangement with some publishing house in this country, for which course a cogent argument was found in the purity of text guaranteed by this restricted publication. Yet the legality of such restriction here seemed doubtful, and the American committee were unwilling to take any steps that would either prevent the widest diffusion of the work, or connect their labors with either the fact or the suspicion of seeking any pecuniary emolument. It was decided not to trammel the publication of the work in this country by any attempted copyright; but it seemed only just to the English University presses, whose outlay in the enterprise had been very large, that the American committee should for the time being set their seal upon the editions issued by these presses, as those for whose accuracy they held themselves responsible.

The revision of the New Testament was finished in the autumn of 1880, and the eagerness with which it was sought made its sale a phenomenon in English literary history. The Old Testament appeared in 1884. The Old-Testament revisers had thus the advantage, in their later labors, of the criticisms upon the New Testament, which, both in England and in this country, were made very freely, and were of the most various character, generally candid, sometimes severe, and, on the whole, fairly favorable.

There have been two or three marked exceptions, as in the violent onslaught of Dean Burgon and the somewhat magisterial judgment of Prof. Blackie, who designated the revised New Testament as "a translation largely disfigured by want of sense and want of taste," which, while it "has done good service by bringing prominently before the public some half dozen—a dozen it may be—of passages either liable to be misunderstood, or whose force was weakened or obscured in the authorized version," yet falls in great part "into the category of unreasonable curiousness and unprofitable minuteness." Perhaps the general sentiment has been that the work, while, as a whole, unquestionably scholarly and conservative, adhering in the main as closely as could be expected to the principles prescribed, has sometimes departed unnecessarily from the language of the common version, and sacrificed occasionally its freer movement and rhythmical flow to an unneeded and half-pedantic adherence to the idioms of the original. It was easy to lay down in advance the general principles that should guide the revision; the difficulty of uniformly following them out in practice could be learned only from the actual trial. The arguments for or against a given change will range through every conceivable degree of strength or weakness. A change strongly commended in a particular passage, if carried out consistently, may lead to others that occasion its ultimate rejection. A change rejected in a given place will be finally admitted under the stress of passages where its admission is imperative. The process of revision thus becomes at almost every step a balancing of conflicting considerations; and this all the more as the work is a revision and not a new translation; as it is a revision made in one stage of the language, of a version belonging to a stage widely different; as it is a revision of a work whose sacred character demands peculiar delicacy of handling, and which in its progress through the ages has at once greatly modified the popular speech, and imbedded, and, as it were, colonized in its bosom a large body of specialized and consecrated terms. What shall be done with multitudes of these terms, lying on the border-land between the archaic and the modern, fluctuating in meaning between the sacred and the secular, can best be determined by those who have had to wrestle with the problems presented by the unique Biblical diction, and to reconcile the claims of fidelity to the original with the numberless hallowed associations that cluster around the version, and utter their *procul profani* to any rude hands that may be laid upon them. The Old-Testament revisers have, perhaps, avoided some of the rocks on which their predecessors may have stumbled, and possibly have erred on the side of over-conservatism. To sum up in brief the purposes and work of the revision: It has sought, especially in the New Testament, to settle the original text which lies at the basis of all translation. It has corrected innumerable acknowledged errors, which more or less disfigure the authorized version, and darken its meaning. It has removed words either obsolete in meaning or used in obsolete senses. It has arranged the text into paragraphs demanded by the sense, abolishing that chopping up into verses which so impedes the continuous flow of thought, and gives to the narrative, argument, rhetoric, and poetry of the Bible the appearance of a series of apothegms. It has given to the Hebrew verse its poetical structure, alike in the Old-Testament and in the New-Testament citations. It has removed from the chapters their unauthorized and often misleading headings. It has given to the Scripture proper names uniformity of spelling. It has placed on the margin not only alternative readings in text and translation, but a large body of newly-selected references to parallel and illustrative passages. And, what perhaps is not the least of its services, it has set its seal on the substantial fidelity and reliableness of the old English Bible, and dissipated alike the fears of friends and the hopes of enemies of the Bible, that criticism and scholarship would prove fatal to its authority, and undermine the foundations of our evangelical theology. The system of evangelical truth emerges with fresh luster from the trial. "*Merses profundo, pulchrior evenit.*"

What, finally, shall be the precise outcome of this grand international recasting of our English Scriptures, it is, perhaps, too early to predict. It has its defects; but defects cleave to all things human; and we feel assured that time and use will make increasingly apparent its great and transcendent excellences. At all events, a work that for more than ten years has tasked the conscientious labors of some of the best scholarship of the age in connection with the Book of God, can not prove in vain. Its beneficent iconoclasm has forever broken the spell of unreasoning idolatry that rested on a single version of the Bible, without abating in one jot or tittle the reverence for the Sacred Book itself; and if it fail to prove the ultimately accepted form of Scripture for English-speaking Christendom, it will, at least, have made a contribution of inestimable importance toward that future version which shall be so.

BOKHARA, a khanate of Central Asia, nominally independent, but virtually controlled in its foreign relations by Russia. The population, including nomads, is about 2,000,000. The area is something over 100,000 square miles. The inhabitants are mostly Tadjiks and Uzbecks, mixed with Turkomans, Arabs, and Jews. The population of Bokhara, the capital city, is about 30,000. A large trade is carried on with Russia by means of caravans. The exports are cotton, which is the leading article, dried fruit, raw and dyed silk, indigo, silk sashes, turquoises, shawls, and furs. Trade is also conducted in English manufactures with Afghanistan, and in Persian produce with Meshed. The manufactures are cotton fabrics, silks, carpets, leather, swords and knives, and jewelry. In the matter of education and learning, Bokhara ranks first among the Mohammedan states of Central Asia.

The Afghan imbroglio and Russian war preparations led to fresh political and military activity in the three khanates, as well as in the Turkoman country, on the part of Russia. Mozaffer-ed-Din, the old and sickly Ameer of Bokhara, avoided giving any occasion for Muscovite interference. Presents of arms from St. Petersburg were not used, and the service of military instructors sent from Tashkend was politely declined. When the Afghan dispute reached the stage of belligerent preparations, he was warned to abstain from all intercourse with his son-in-law, the Ameer of Cabul, on pain of losing his throne. The decision of the Russian Government to carry a branch of the Transcaspian Railroad from Sarakhs to Merv, and thence into Bokhara, elicited protests from the aged fatalist, who desired simply to retain the shadow of independence he still enjoyed. The Russian Government demanded furthermore the cession of one of his provinces. Finally, about the 1st of September, the Ameer resigned the throne in favor of his second son, the heir-apparent and Governor of Chardjui. The eldest son of Mozaffer-ed-Din, the Kette Tore, was a fugitive in India. A third son was brought up in the corps of pages at St. Petersburg. The new Ameer, Turani Khan, is described as a voluptuary, prematurely aged by indulgences. The Governor-General of Turkistan gave the Ameer to understand, in his negotiations on the railway question, that any hostile act on the part of the new Ameer would have fatal results.

BOLIVIA, an independent republic of South America. (For particulars relating to area, territorial division, and population, see "Annual Cyclopædia" for 1883.)

Government.—The President of the Republic is Don Gregorio Pacheco. His Cabinet is composed of the following ministers: Foreign Relations, Dr. Jorge Oblitas; Justice, Public Worship and Instruction, Don Martin Lanza; Finance, Señor H. Gutierrez; Interior, Dr. M. M. D. Medina; War, Col. Severo Zaphata.

The Bolivian Consul-General at New York is Señor Melchor Obarrio; the Consul at New Orleans, Señor T. P. Macheca, and the Consul at San Francisco, Señor F. Herrera.

The United States Minister Resident at La Paz is Hon. William Seay.

Army.—The standing army comprises 8 generals, 359 superior and 654 subaltern officers, and 2,000 men, involving an annual expenditure of about $1,400,000.

Finances.—The national indebtedness amounts to about $10,000,000, and consists of a war loan of $4,000,000, and of damages amounting to $6,000,000 allowed by the Government in the treaty with Chili, to the Chilian holders of Bolivian mining-stocks. There is no other outstanding debt.

Telegraphs.—There is a line in operation between Chililaya, on Lake Titicaca, to La Paz and Oruro, measuring 183 miles, thence to be carried to Cochabamba and Sucre, and also a line of 200 miles from Sucre through Potosi, Tupiya, and other cities to the frontier of the Argentine Republic, where it connects with lines through that country.

Exports.—The export of silver-ore alone amounts to $21,700,000. Other exports consist of gold, copper, tin, lead, bismuth, cinchona-bark, coca-leaves, coffee, and cocoa, which are recognized as among the best in the world, medicinal plants, hides, goat and chinchilla skins, and alpaca, llama, and sheep wools, which amount to more than $10,000,000. Tho total exports are over $33,000,000; the total imports, over $12,200,000. Nearly seven eighths of the imports and exports of Bolivia pass through the Peruvian port of Arica, owing to its proximity to the principal cities of Bolivia; hence the credit of this trade is given to Peru in the usual statistical reports.

Silver.—The product of the silver-mines of Bolivia is estimated at $15,000,000 per annum. The introduction of new machinery is adding much to this production. The Huanchaca mines, in the southern part of Bolivia, about latitude 20° south, and longitude 67° west, in a southwestern direction from Potosi, are considered the richest, and produce about 6,500,000 ounces. Late discoveries there promise an increased yield. Potosi is still productive, after being worked over two hundred and fifty years, and produces about 2,800,000 ounces. Oruro yields as much. A great and apparently well-directed revival in mining enterprise has been going on in Bolivia in 1885, attention being given particularly to old and abandoned mines. Many of these have been unworked for over sixty years for the lack of capital, during and after the war of independence, and the period of continual turmoil that has followed up to quite recently, when the country was plunged into a war that has now virtually excluded it from the Pacific by the loss of its only port there, Cobija. Besides the three mining districts named, there are now the Colquechaca, Gallofa, Guadalupe, and others vigorously being taken in hand. The revival taking place is clearly noticeable in the growing prosperity and activity of the cities of Sucre, Potosi, Oruro, and La Paz. In the south the capitalist and mine-owner, Señor Aillon, has formed a company for the working of the Garci-Mendoza mining district, which had been long abandoned. The discovery of good coal in the province of Lipez promises to be of great assistance.

Copper.—While silver-mining is in the ascendant in Bolivia, copper-mining has of late years been on the decline, through lack of miners and difficulties of exportation, though in most other copper-producing countries, despite the low price, larger amounts have been turned out.

Cinchona-Bark.—Bolivian cinchona was formerly gathered by the Indians, and in such a manner that large forests were destroyed, trees cut down, and the bark taken in any way, merely to make up large quantities. Now the quinine-bark plantations, or, as they are called in Bolivia, *quinales*, are cultivated and nourished with care and science; the principal planters being Mr. Otto Richter, a German, possessing 2,000,000 plants, and the estate of John Kraft, lately deceased, 2,000,000. The cultivation of "quina" in plantations, systematically, has been carried on for about eight years. At Mapire there are under cultivation about 4,500,000 plants; Yungas has 1,000,000; Longa, 500,000; Guanay, 500,000. Where the principal *quinales* are, it is a very rough and broken country, the Andes being seamed and cut into deep valleys in every direction. The trees are planted on the sides of the valleys or ridges, at altitudes of 3,000 to 4,000 feet above the sea. They want a great deal of sun, heavy rains, and fresh winds.

Commerce.—American customs returns make no note of any trade with Bolivia, for the reason that whatever trade we have with that republio is conducted through adjacent countries, Bolivia having no seaport. In 1884 England exported to Bolivia cotton goods, iron manufactures, apparel, woolens, etc., to the amount of nearly $2.000,000. There are more than fifty first-class importing houses in the republic. Twenty of these are Bolivian firms, fifteen German, six French, five Spanish, and one Dutch. There are neither English nor American firms. The Bolivian consul-general at New York has urged his Government to establish a system of minute statistics relating to commerce with foreign countries, and thus demonstrate that Bolivia's industries and trade are much more important than most people not familiar with the subject suspect.

The Bolivian Cotton-Tree.—A new alimentary substance, the seeds of the Bolivian cotton-tree, has attracted the attention of the Paris Academy of Sciences. It is rich in nitrogenized substances, and contains 23 per cent. of fibrin and 6 of casein. It is thought that flour from the seed will be suitable for pastry and confectionery. It is likely to be used in sugar-making as a substitute for carbonic acid.

The Gran Chaco Expedition.—Early in June, 1885, an expedition, consisting of three steamers and several sailing-vessels, ascended Paraguay river. The expedition was fitted out in grand style, having on board a complete staff of engineers and telegraphers, under the command of Don Miguel Suarez Arana, for the purpose of selecting a suitable spot on the banks of the river, between the 20th and 21st parallels of south latitude, and there founding a city, to be called Pacheco, and constructing a highway westward through the Indian territory to the Bolivian city of Sucre. Don Miguel Suarez Arana has been silently preparing this enterprise for ten years. Since 1875 the Bolivian Government has been in hopes that a similar expedition would be attempted in response to the liberal concessions which Congress then and in 1878 voted to those who should undertake and carry it out. Being anxious to turn the valuable trade of Bolivia toward the Atlantic, the Argentine Government has enabled Don Miguel Suarez Arana to bring his long-nourished scheme to a solution. The expedition was expected to occupy at least one year.

BRAZIL. (For details relating to area, territorial divisions, population, etc., see the "Annual Cyclopædia" for 1884.)

Government.—The Emperor is Dom Pedro II, born Dec. 2, 1825; proclaimed April 7, 1831; regency until July 23, 1840; crowned July 18, 1841; married, Sept. 4, 1843, Theresa Christina Maria, daughter of the late King Francis I of the Two Sicilies.

The new Cabinet was formed on Aug. 20, after the resignation of the Saraiva Cabinet, which had held office since May 7, and succeeded the one of Senator M. P. de Souza Dantas. It was composed of the following ministers: President of the Council and Minister of Foreign Affairs, Senator Baron de Cotegipe; Minister of Agriculture, Commerce, and Public Works, Representative Antonio da Silva Prado; Minister of Finance, Representative Francisco Belizario Soares de Souza; Minister of the Interior, Senator Baron de Mamoré; Minister of Justice, Senator Joaquin Delphino Ribeiro da Luz; Minister of War, Senator João José de Oliveira Junqueira; and Minister of the Navy, Representative Alfredo Rodrigues Fernandes Chaves.

The Council of State comprised, besides the Princess Imperial, Donna Yzabel, and Prince Gaston of Orléans, Count d'Eu, the following members extraordinary (limited to twelve): Senators Viscount de Muritiba, Viscount de Bom Retiro, Admiral Lamare, J. J. Teixeira, M. P. de Souza Dantas, Viscount de Paranaguá, J. L. V. Cansansão de Sinimbri; Deputies Martin Francisco, Ribeiro de Andrade, P. J. Soarez de Souza, J. C. de Andrade Pinto; and Senators Affonso Celso de A. Figueiredo, J. B. da Cunha e Figueiredo, Lafayette Rodrigues Pereira, and L. A. Vieira da Silva.

The Brazilian Minister at Washington is Baron de Itajuba, late Minister Resident in Madrid. The Consul-General of Brazil at New York is Dr. Salvador Mendonça. The United States Minister to Brazil is Hon. T. A. Osborn. The United States Consul-General at Rio de Janeiro is Mr. C. C. Andrews.

Finances.—On March 3, 1885, the national indebtedness stood as follows:

	Milreis.
Loan of 1868	22,433,500
Loan of 1879	43,777,500
Foreign debt	163,732,444
Funded home debt	338,119,900
Debt anterior to 1827	142,046
Borrowed out of the orphan fund	15,831,303
Due private loaners	700,000
Due to dead or absent parties	2,222,393
Emancipation fund	2,735,355
Savings-bank deposits	18,478,818
Deposited in the Rio pawnbrokers' establishments	790,987
Sundry deposits	11,161,108
Public funds	1,422,904
Treasury notes	50,075,500
Treasury notes (law No. 3,229 of 1884)	10,752,000
Paper money	187,343,725
Total	869,719,483

The balance-sheet was as follows:

ITEMS.	Income.	Outlay.
	Milreis.	Milreis.
Actual revenue and expenditure of the Government in 1881–'82	131,986,964	139,470,648
Budget for 1883–'84, estimate	132,115,400	130,185,060
Budget for 1885–'86	133,663,400	128,559,238

Custom-House.—The following is a table of duties collected at Rio de Janeiro:

SOURCES.	Milreis, 1883.	Milreis, 1884.
On imports	33,215,997	33,258,195
On clearances of vessels	185,991	181,785
On exports	5,909,418	6,957,086
Extra duties levied	29,234	29,384
Revenue drawn from bonded stores.	272,339	266,952
Total	39,612,979	40,693,402

SOURCES.	First 6 months of 1883–'84.	First 6 months of 1884–'85.
	Milreis.	Milreis.
On imports	13,974,855	15,128,367
On clearances of vessels	102,031	87,236
On exports	3,180,757	4,273,231
Extra duties levied	13,460	16,245
Revenue drawn from bonded warehouses	131,325	422,544
Total	19,402,428	19,627,623

The duties that were collected at the other ports of entry are shown in the table at the top of the next page.

PORTS.	First 6 months of 1884–'85.	Second 6 months of 1883–'84.
	Milreis.	Milreis.
At Bahia	5,600,572	6,019,150
At Pernambuco	4,836,412	5,287,675
At Pará	3,183,438	4,885,537
At Santos	3,353,253	4,283,628
Total	16,973,675	20,475,990

Commerce.—The products of Brazil are more various than those of any South American state, due to her great diversity of soil. The hilly lands near the coast and in the neighborhood of the province of Rio de Janeiro are the center of the coffee industry; the sugar estates are mostly on the eastern border of the province of Pernambuco; farther north and in the valley of the Amazon, where the soil is annually overflowed to a depth of three feet, India-rubber is the principal product; and to the south, in the province of São Paulo, where lie the more elevated lands, and where the soil is lighter than that devoted to cane, the farms yield cotton as their almost exclusive product. All along the coast, from Bahia and the lake district of the province of Alagoas to the Rio Grande, tobacco is the leading industry; while on the vast plains of the interior cattle-raising is carried on on an extensive scale, and the valleys of the Paraguay and the Paraná yield the valuable maté tea. The cities of Pará, Pernambuco, Bahia, and Rio de Janeiro are the principal ones from which these various products are exported. Due to the immensity of the Brazilian territory, and to the difficulties of overland communication, almost every one of these staple products has its own port, lying in its own district, through which it reaches foreign markets.

The following table exhibits the foreign trade, expressed in milreis:

YEARS.	Imports.	Exports.
1881–'82	182,251,700	209,851,400
1882–'83	185,861,900	195,498,600
1883–'84	194,222,500	202,434,800
Average	187,445,400	202,594,900

The recent coastwise trade has been as follows:

IMPORTS AND EXPORTS.

YEARS.	Milreis.
1881–'82	158,254,400
1882–'83	139,497,100
1883–'84	131,350,900
Average	143,033,800

The "Diario Official," of July 1, 1885, published the figures relating to coffee exportation during five crop years, ended June 30:

FROM RIO.

DESTINATION.	1884–'85.	1883–'84.	1882–'83.	1881–'82.	1880–'81.
To United States......tons	152,292	118,729	153,011	134,357	123,587
To Europe	75,031	56,125	97,813	78,449	112,792
To other countries	8,500	12,100	14,200	15,480	16,500
Totals	235,823	186,854	264,524	228,286	252,879

FROM SANTOS.

DESTINATION.	1884–'85.	1883–'84.	1882–'83.	1881–'82.	1880–'81.
To United States......tons	27,914	24,694	19,120	13,777	13,917
To Europe	100,563	87,618	88,677	75,670	55,053
Totals	128,477	112,310	107,797	89,447	68,970

The shipments of sugar from Pernambuco were as follow:

DESTINATION.	1st October to 28th September.	
	1884–'85.	1883–'84.
	Tons.	Tons.
To Europe	24,751	32.733
To the United States	47,703	52.308
Total	72,454	85,041

The crop of 1884–'85 was short. The total shipments of cotton from Pernambuco in 1885 were 134,377 bales.

The hide shipments from Rio Grande do Sul were as follow:

DESTINATION.	DRY HIDES.		SALTED HIDES.	
	1884.	1883.	1884.	1883.
To Europe	103,369	127,762	332,056	343,540
To the United States	267,973	174,642	34,626	6,194
Total	371,342	302,404	366,682	349,734

The American trade with Brazil exhibits these figures:

YEARS.	Imports from Brazil to the United States.	Exports of domestic goods from the United States to Brazil.
1885	$45,263.660	$7,258,035
1884	50,265,889	8,645,261
1883	44,488,459	9,159,330

The decrease both in imports and exports is due chiefly to the decline in prices; in bulk the trade both ways has been rather on the increase.

Coal.—A mining engineer and staff have gone to Desterro, Santa Catharina, with the view of developing the important coal-basin in the locality. It has been ascertained that the coal is suitable for gas and for burning in locomotive and marine engines, while the mines are in proximity to districts from which an extensive domestic supply should be drawn. The whole of the coal from the various seams can be worked by means of adits driven in from the face of the hills. There is on the spot an abundant supply of good water and magnificent timber, and there is a well-built railway at their very entrances.

Army.—Pursuant to the law of Feb. 27, 1875, military service is obligatory on Brazilian subjects, though there are numerous exemptions and substitutions. The period of service in the regular army is six years, and in the reserve three years. The actual strength of the army in 1884, including 1,900 officers of all ranks, was 13,704; in time of war it is raised to 30,000 men.

The *gendarme* corps comprises 10,792 men, 1,063 of whom are at Rio. The National Guard has been disbanded, to be reorganized after the new census shall have been taken.

Navy.—In 1885 Brazil had eleven armored vessels. The most powerful are the Riachuelo and the Aquidaban. The latter was built near London, and launched in the summer of 1885. She is the sister ship of the former, and measures 280 feet in length, having a width of 52 feet, and a draught of 18 feet, with a displacement of 5,000 tons. The engines have an indicated horse-power of 4,500; the bunkers are large enough for 800 tons of coal, and the speed of the vessel is 15½ knots. The armament of the Aquidaban consists of four 9-inch 20-ton guns, four 5¾-inch Armstrong guns, and fifteen Nordenfeldt guns. When the Riachuelo was ready to sail on her first trip, she was pronounced the most perfectly constructed ship-of-war afloat, possessing in respect to speed, coal, endurance, and arrangement, as well as fire of guns, special advantages, such in fact as are not contained in any other ship except the Aquidaban. The Riachuelo is a twin-screw turret-vessel of 6,000 tons and 6,000 horse-power, built of steel, 305 feet long, 50 feet wide, and 30 feet deep. She can make 15 knots an hour, and run at that speed 4,500 miles without re-coaling. Her armor-plates are 10 and 11 inches thick, and the armament consists of five 9-inch 20-ton breech-loading rifled guns in two revolving turrets, and six 6-inch breech-loaders, besides fifteen Nordenfeldt machine-guns. The vessel is also provided with Whitehead torpedoes. The Riachuelo reached Brazil in 1884. There were in the Brazilian Navy, in 1885, five sea-going ironclads, of which the two most noticeable are the Javany and the Sotimoes. These are double-turreted monitors, built in France, having a speed of twelve knots, with thirteen inches of armor on the turret, and each carrying a battery of four 10-inch Whitworth rifles, besides Nordenfeldts, and there are three other ironclads of speed and several cruisers building in Brazil's own yard at Rio de Janeiro. The largest of these will have a speed of 15½ knots, and will carry four very heavy Armstrong breech-loaders, besides ten smaller ones and a dozen Nordenfeldts. A feature not to be omitted in Brazil's floating war array in 1885 is the group of five fast Yarrow torpedo-boats, the first installment of a fleet of twenty.

Postal Service.—There were in operation in 1883 throughout the empire, 1,678 post-offices, dispatching 36,767,325 letters, against 35,815,869 in 1882; the receipts being 1,647,959 milreis, and the outlay 2,154,440.

Telegraphs.—According to the report of the Minister of Agriculture, Commerce, and Public Works, submitted on July 25, 1885, there were in operation in Brazil at the time, 9,299 kilometres of telegraph lines, with 15,263 kilometres of wire and 159 stations. The number of messages sent during the year was 331,884, for which there were collected altogether 1,039,032 milreis, 315,078 being for Government dispatches and 724,854 for private telegrams. The expenditure was 1,779,378 milreis. United States Minister Osborn, acting in accordance with instructions from the State Department at Washington, concluded a contract securing to the Central and South American Telegraph Company a concession to establish cables between Buenos Ayres and Rio de Janeiro, and land lines between Buenos Ayres and the Pacific side, thus securing to an American company continuous and independent telegraphic communication between the United States and Brazil. The Brazilian Submarine Company had protested against this privilege being conceded, but the Imperial Government, by a decision dated Jan. 24, 1885, rejected the protest as not having any legal foundation. The minister also alluded in his report to the popularity that telephones were gaining in Brazil, and the success which the combining of the telegraphic and telephonic services in the country has been attended with.

Railroads.—In 1885 the decree was issued for the construction of two lines of narrow-gauge railroad in the province of Pernambuco, having a total length of 158 miles. Thirty-two locomotives, valued at $296,113, were shipped to Brazil from the United States in 1883–'84.

In accordance with the statement published at Rio by the Inspector-General of Lands and Colonization, the Brazilian railroad system stood, at the close of the year 1884, as given in the table on page 103; the capital of the various lines being given in thousands of milreis, and the length of each in kilometres.

Emancipation.—In May, 1885, the condition of affairs in the Parliament of Brazil was very much like that of the British Parliament early in August. Premier Saraiva, chief of the Liberal party, with a small majority in the lower house, was depending on the Conservative vote to carry out the desired reform of the emancipation of slavery. The more advanced wing of this party, led by Senhor J. Nabuco, which desired immediate abolition, and the most backward wing of the Conservative party, which was opposed to any step toward emancipation, refused their votes to the Government, and compelled it to seek the Conserv-

PROVINCE.	Railroad.	In operation.	Building.	Projected.	Capital.
Pará..........	Belem.........	....	61	141	5,656
Rio Grande do Norte.......	Natal	121	....	....	6,914
Ceará.........	Baturité	110	....	84	....
	Comassim......	129	....	88	....
Parahyba.....	Conde d'Eu....	100	23	....	6.000
Pernambuco...	São Francisco..	124	....	....	16,376
	Cachangá......	19	....	9	1,278
	Limoeiro.......	96	46	....	7,538
	Recife.........	39	106	....	....
	Carnarú........	...	83	28	....
	Olinda.........	13	....	....	500
Alagoas.......	Paolo Affonso..	116	....	....	....
	Central........	....	83	....	4,553
Sergipe.......	Aracajú........	....	....	....	....
Bahia.........	Bahia San Francisco.........	123	....	....	16,002
	Extension......	148	174	132	....
	Central........	225	77	200	13,000
	Santo Amado..	36	....	....	2,400
	Nazareth.......	34	....	52	1,250
	Cachoeira.......	....	....	....	2,000
	Timbó.........	....	....	83	2,650
Minas e Bahia.	Caravellas......	142	30	237	12,000
Rio de Janeiro.	Cantagallo.....	200	....	....	10,873
	Campos........	18	....	....	600
	Rio Pardo......	....	....	36	....
	Carangola......	175	13	60	6,000
	Araruama......	41	....	....	800
	Rezende.......	29	....	....	2,200
	Rio das Flores .	24	3	....	....
	São Fidelis.....	....	14	61	....
	Rio do Ouro....	54	....	18	1,165
	Volta Grande ..	....	....	....	780
	Pyrahyense....	34	22	28	1,400
	Theresopolis....	....	....	48	....
	Rio Bonito.....	9	....	....	....
	Corcovado.....	....	4	....	400
	Padua.........	79	14	....	....
	Macahé........	97	....	....	8,000
	Magé..........	....	49	....	2,000
	Rio Preto......	43	32	....	3,800
	União..........	63	....	....	1,735
	Grão Pará......	25	....	71	3,100
	Cunha.........	....	20	8	840
	Bananalense....	8	21	....	300
	Sumidouro.....	....	29	....	....
São Paulo.....	Pedro II.......	725	61	239	90,909
Minas Geraes .	Ituana.........	160	....	80	5,403
São Paulo.....	Santos.........	139	....	....	23,556
	Paulista........	243	....	....	20,000
	Tieté..........	186	20	138	8,000
	Rio............	231	....	....	10,665
	Mogyana.......	368	....	....	8,350
	Rio Claro......	77	49	134	1,800
	Banalense......	8	21	....	300
	Bragantina.....	....	53	....	2,320
	Mogyana.......	....	271	....	7,000
Paraná	Coryteba.......	41	69	....	11,492
	Leopoldina.....	277	210	150	14,000
Minas Geraes .	Peste..........	99	....	....	1,200
	Rio Pomba.....	61	4	20	....
	Minas..........	170	....	....	15,495
	Mineira........	117	40	84	3,123
	Piau	140	....	20	1,200
	Oliveira........	....	....	....	4,000
	Patos..........	....	....	....	8,000
	Jacutinga......	....	....	....	4,000
	Rio Pardo	....	....	....	....
	Rio Novo	7	....	....	....
	Pitanguy.......	....	56	104	9,000
Espirito Santo.	Ponta Nova....	....	....	....	....
	Natividade.....	218	....	....	....
Santa Catharina........	Theresa Christina..........	....	116	....	5,451
Rio Grande do Sul.........	Porto Alegre...	113	....	....	3,538
	Caceguy.......	180	138	62	....
	Pelotas	....	....	20	....
	Santa Maria ...	...	....	....	....
	São Leopoldo...	....	....	....	....
	Bagé	....	281	....	13.521
	Itaqui.........	....	184	....	6,000
	Uruguayana....	....	....	262	....
	Bajé-Cacequy ..	....	....	210	....
	São Jeronymo..	....	....	....	....
	Montenegro....	....	....	200	2,306
	Total.........	5.657	2,402	3.359	
Grand total	....			11,418	

ative support for its reform bill. As soon as the situation was well defined, the Government was defeated on a motion, the Conservatives preferring to have the honor of the reform instead of giving it to the Liberals. The new Premier, Baron de Cotegipe, is the author of the well-known saying that "the Conservatives must, can, and will solve the emancipation question." They have, in fact, the distinction of having carried into effect the most important measures against slavery in Brazil, the first of which was the provision for the freedom of the new-born secured by a Conservative leader, the late Viscount de Rio Branco. On September 24 the Brazilian Senate concluded the discussion of the bill providing for the gradual extinction of slavery as it came from the Chamber of Deputies, and the law was promulgated on the 28th, the fourteenth anniversary of the Free Birth law. The speech from the throne, delivered by the Emperor, alluded to the emancipation question in the following sentences: "The gradual extinction of slavery, the special object of the extraordinary session, should continue to deserve your greatest solicitude. This question embraces the highest interests of Brazil, and requires a solution that will tranquillize our agriculture." The character of the bill is such that, from the sole operation of the reduction in value of the slaves, slavery can not last more than seventeen years, and with the aid of the emancipation fund it will be extinguished in seven years, without disturbance to the economy of the state. The registration of slaves in Brazil, in 1873, showed their number to be 1,540,796. Thanks to the emancipation fund, created by the law of Sept. 28, 1871, aided by the contributions of private associations, and more than all by the good disposition of the slave-owners themselves, at the beginning of 1884 the number of slaves had been reduced to 1,150,000, and in the summer of 1885, now that the two provinces Ceará and Amazonas have abolished slavery entirely, and that of Rio Grande do Sul has decreed the gradual emancipation of a large number every year, the "black number," as the national conscience calls it, was reckoned at not more than 1,000,000.

Immigration.—In 1884 there landed at Rio de Janeiro 17,999 immigrants, against 26,798 in 1883, and 25,845 in 1882. Among the newcomers in 1884 there were 8,683 Portuguese, against 11,286 in 1883 and 9,269 in 1882; 5,933 Italians, against 10,689 in 1883, and 10,562 in 1882. There arrived in 1884 only 1,240 German immigrants. From the United States there landed in 1884 only 29 immigrants, against 23 in 1883 and 20 in 1882. The decrease was due to the cholera in Italy and Spain, and the severe quarantine measures of the Brazilian Government while it lasted. In 1885 large numbers of emigrants again left Europe for Brazil early in the year, so that in the spring no less than twelve steamers landed

18,000 of them in three months at Rio, 6,000 in the Province of Paraná, and 4,500 at Rio Grande do Sul.

During previous years the numbers of immigrants arrived in Brazil were as follow: 1870, 9,123; 1871, 12,331; 1872, 18,441; 1873, 14,931; 1877, 29,029; 1878, 22,423; 1880, 22,859; 1882, 25,845; and in 1883, 26,789. Among those landed in 1883 there were 11,286 Portuguese; 10,698 Italians; 2,343 Spaniards; 1,690 Germans; 249 Austrians; 158 British subjects; 152 Frenchmen; 94 Swiss; and 119 belonging to other nationalities.

Colonization.—German colonization at Joinville and Rio Grande do Sul flagged in 1885, at the former place in consequence of some difficulties between the Hamburg Colonization Company and the Brazilian Government, interfering, it was thought only temporarily, with the prompt payment of part of the sea-passage of colonists from Germany.

Meanwhile, Mr. G. Stutyer purchased in April, 1885, about 7,000 acres for settlement by German colonists at Blumenau, on the Itajahy river. Blumenau is an extensive colony, with a population of 20,000, 15,000 of whom are Germans. And in October a new colonization society was formed in Berlin, to direct emigration especially to Rio Grande do Sul.

Exploration of the Xingu.—In the summer of 1885 Dr. Charles von Heinen returned to Pará from an exploring expedition in the Matto Grosso. This immense region, more than four times the size of France, occupies a large part of central and western Brazil, and was till then hardly known to geographers except in the most imperfect manner. It is divided by great rivers, of which the Madeira, the Tapajos, the Xingu, the Araguaya, and the Tocantins flow northward, and the Paraguay flows southward. It is watered by innumerable streams, which unite with these rivers, along whose banks live thousands of the most primitive people. There is steam navigation on the Tapajos and Tocantins, and a railway is constructing along the banks of the Madeira. But the Xingu is almost unknown. Previous explorers have not passed the fourth degree of south latitude, beyond which were supposed to be fierce tribes of cannibals. The primitive inhabitants of Brazil, retiring before the whites, were supposed to have concentrated themselves here as in a last stronghold. Between the Piranhaguara and Paranatinga the river is absolutely unknown, and the existence of a water-way for trade to Pará is of the utmost importance to the inhabitants of the Matto Grosso, now confined for commerce to the Paraguay. The military force, commanded by Paulo Castro, worked with the civilians in perfect accord. They left Cayaba, May 26, 1884, crossed the Paranatinga on July 5, reached Piranhaguara on Oct. 13, and returned, without the loss of a man, to Cayaba early in the summer.

Imprisonment of an American Consul.—On May 26, the Department of State at Washington received a report from Minister Osborn in regard to a matter that led to the arrest and imprisonment of Beckford Mackey, United States Consul at Rio Grande do Sul. It appears that Mr. Mackey had for many weeks been violently assailed, for no ascertained cause, in a newspaper there. The editor, named Thadeo Amorin, sent Mr. Mackey a note on April 13, proposing that if he subscribed for the paper it would cease to attack him; he declined the offer, and kicked the messenger out of his office. On the next day the editor made a scurrilous attack on Mackey, and assailed his mother. On the same evening, as Mackey entered a theatre, he was confronted by Amorin with an uplifted stick. Mackey at once struck him a heavy blow in the face with his walking-cane. His assailant drew his pistol, but before he could fire the consul shot him twice, and he fell to the floor. Mr. Mackey then surrendered himself to a police magistrate. On June 5 Mr. Mackey was absolved by the jury.

BRITISH COLUMBIA. The completion of the Canadian Pacific Railway in 1885 marked the beginning of a new era in British Columbia. Hitherto the province has been completely isolated. It has had more interests in common with the neighboring States of the Union than with the Dominion, of which nominally it has formed a part since 1871, but from the rest of which it has been more completely separated than the Dominion is from the British Isles. Its interests are now decidedly Canadian. Besides the advantages the province will obtain from being a great trade-route between England and China and Japan, it is expected that there will now be a rapid development of its natural resources. The Imperial and Dominion Governments have recognized the strategic importance that British Columbia acquires by the completion of the railway, and measures have been taken to fortify the Pacific terminus.

Government.—The Lieutenant-Governor is the Hon. Clement Francis Cornwall, B. A. The Executive Council is composed as follows: Premier, Chief Commissioner of Lands and Works, and President of the Council, Hon. William Smithe; Attorney-General, Hon. A. E. B. Davis; Provincial Secretary, Minister of Mines, and Minister of Finance and Agriculture, Hon. John Robson.

The Chinese Question. — Popular excitement over the Chinese question reached a very high pitch in 1885, and in British Columbia, as in several other provinces, threats of secession were made. The anti-Chinese agitation, as a political question, began in this province about 1872. Lately there has been a rapid immigration of Chinese, on account of the construction of the Canadian Pacific Railway, and at present the Chinese population of the province is roughly estimated at about 25,000, out of a total of about 60,000. No accurate census has ever been taken of the Chinese in British Columbia. Many of the people of the Pacific province were irritated at the action of the Dominion Parliament in treating the Chinese question as a Federal one, pure and simple. Practically, the alleged grievance is one that affects British Columbia only. In Ontario and Quebec, for instance, there are but twenty-nine Chinese out of a population of over three millions and a quarter. But, if the presence of the Chinese is a source of discontent in British Columbia only, the exclusion of the Chinese from that province might affect the whole Dominion, and even the empire, in their foreign relations. Huang Sic Chen, of the Chinese consulate at San Francisco, in a letter to the Canadian Commissioners appointed to investigate the Chinese question, urged that it was unjust in principle for Europeans to insist upon the right of unrestricted commercial relations with China, and at the same time enforce unequal restrictions upon Chinese merchants and laborers. He then went on to argue that the opium-traffic fostered by the British Government constituted a grievance to China that sunk the imaginary complaints of British Columbians into insignificance. Furthermore, one of the main sources of revenue for the Canadian Pacific Railway is expected to be the trade with China and Japan, and this might be seriously affected by the exclusion of the Chinese from British Columbia. The legal grounds for treating the Chinese question as a Federal one, there could be no mistake about, as the Canadian Constitution reserves to the Dominion Parliament the right to legislate on all matters affecting immigration, foreign nations, trade, and commerce, or Dominion or imperial interests. Under any one of these heads the Chinese question might be classed. The Legislature of British Columbia passed a series of resolutions denouncing the Chinese, and, when it became apparent that the Provincial Legislature had no power to do more than express its opinion, it was expected by the anti-Chinese party that the Dominion Parliament would legislate in the spirit of the resolutions. The Dominion Government, however, would not admit that the question was a provincial one, and appointed a commission to inquire into the whole subject of Chinese immigration, including its trade relations, and the social and moral objections taken to it. The commissioners were the Hon. J. A. Chapleau, Secretary of State of Canada, and the Hon. Judge Gray, of the Supreme Court of British Columbia. The commission met at Victoria, B. C., on Aug. 9, 1884. Evidence was collected not only from British Columbia but from San Francisco, Washington, Australia, and China. The commissioners themselves visited Nanaino, New Westminster, and Yale, in British Columbia, and also San Francisco and Portland. The commission presented a voluminous report to Parliament this year, recommending legislation regulating and restricting Chinese immigration, but not excluding it. Mr. Chapleau concludes that Chinese labor is a most efficient aid in the development of a country, and a great means to wealth; that, as the Chinese are a non-assimilable race, their presence has its disadvantages; that they lower wages, and largely engross domestic service; but that a sufficient supply of white girls for domestic service is not obtainable; that the morality of the Chinese is not lower than that of the corresponding classes of other nationalities; that their custom of living in quarters of their own, "China-towns," is attended with evils, which, however, might be dealt with by police supervision; that they do not burden charities, nor unduly swell the calendar of crime; that they show no desire to meddle with politics; that the Chinaman in Victoria, B. C., and in Portland, where the hostility to him is not so great as in San Francisco, is of a superior type to the Chinaman of the latter place, and the inference is that he improves according as he is treated well. Judge Gray reports that he found three phases of public opinion on the Chinese question in British Columbia: first, of a well-meaning but strongly prejudiced minority, whom nothing but absolute exclusion will satisfy; second, of an intelligent minority, who conceive that no legislation whatever is necessary—that, as in all business transactions, the rule of supply and demand will apply, and the matter will regulate itself in the ordinary course of events; third, of a large majority who think that there should be a moderate restriction based upon police, financial, and sanitary principles, sustained and enforced by stringent local regulations for cleanliness and the preservation of health.

A summary of the bill passed by the Federal Parliament, based upon this report, will be found in the article CANADA.

BULGARIA, a principality in eastern Europe, tributary to Turkey. The Constitution of 1879 vests the legislative authority in a single chamber, called the National Assembly, elected by universal suffrage for three years. In 1883 the Assembly assented to the creation of a second chamber. The executive power is vested in the Prince, subject to the advice of a responsible ministry. In accordance with the Treaty of Berlin, by which the principality was created, Prince Alexander of Hesse, cousin of the present Czar of Russia, born April 5, 1857, was elected hereditary Prince by the Constituent Assembly, April 29, 1879, and confirmed by the Porte with the assent of the powers. In case of a vacancy, the Constitution prescribes that a Prince shall be elected in the same manner.

Prince Alexander, at the instigation, it was supposed, of his Russian advisers, suspended the Constitution in May, 1881, after a breach with the National or Radical party, which at that time demanded the union of the two Bulgarias, and objected to Russian dictation. In 1883 the anti-Russian feeling gained ground after the formation of a nominally Radical ministry under the Russian General Soboleff. The Conservatives united with the Liberals to restore the Constitution, in order to check Russian encroachments. Prince Alexander broke away from Russian influences and re-established constitutional government. Gen. Soboleff and his colleagues attempted to incite the army to rebel; but, failing of the support of the troops, they were dismissed, and the constitutional control of the army was resumed by Prince Alexander. The coalition between the two political parties broke down after its specific purpose was accomplished. In 1884 the rivalries between the Conservatives and Radicals resulted in violent acts in the Assembly and the forcible expulsion of the Conservative members.

The ministry, constituted July 13, 1884, was composed as follows: President and Minister of Finance, and Minister *ad interim* of Public Works and of Commerce, P. Karaveloff; Minister of the Interior, P. R. Slavickoff; Minister of Foreign Affairs and of Worship and of Posts and Telegraphs, J. Tzanoff; Minister of Justice, V. Radoslavoff; Minister of Public Instruction, R. M. Karoleff; Minister of War, Maj.-Gen. Prince M. Cantacuzène.

The amount of the annual tribute to Turkey and of the Bulgarian share in the Turkish debt is to be fixed according to a stipulation of the Treaty of Berlin, by the signatory powers, which have not yet settled upon the amount.

The budget of expenditure for 1885 amounts to 37,000,000 francs, showing a deficit of 1,500,000 francs, to be covered by taxation.

Area and Population.—The area of the principality is estimated to be 24,360 square miles. The population was ascertained by a census taken Jan. 13, 1881, to be 2,007,919, of which number 1,027,803 were males and 980,116 females. The capital, Sofia, has 20,501 inhabitants. The great majority of the people are engaged in agriculture and grazing. In respect to religion 70 per cent. of the population are Christians of the Greek Orthodox confession, 28·79 per cent. Mohammedans, and 0·72 per cent. Jews. According to the language returns, 67 per cent. are of Bulgarian race, 26·26 per cent. Turks, 2·44 per cent. Wallachians, 1·87 per cent. Gypsies, and the rest Greeks, Jews, and Tartars.

Commerce.—The principal export is wheat, of which 1,500,000 tons are shipped abroad annually. Other export articles are wool, tallow, cheese, butter, hides, flax, and timber. The leading imports are textiles, iron, and coal. The iron and coal mines of the country are undeveloped. The value of the exports in 1882 amounted to 34,221,984 francs, and the imports to 41,563,505 francs.

Railroads and Telegraphs.—There is one line of railroad, extending from Rustchuk to Varna, on the Black Sea, 140 miles in length. In 1883 there were 1,325 miles of telegraph lines. The number of messages was 311,185; the number of letters, journals, etc., that went through the post-office was 2,533,172.

Education.—The majority of the public men and leaders of opinion in Bulgaria were educated in the Robert College of Constantinople, founded by a New York merchant, and provided with a corps of American instructors. Under the influence of this training a demand for a liberal Constitution was developed when the principality was founded in 1878. The existence of a class of men qualified to fill the public posts, educated in American conceptions of constitutional liberty, prevented the government from falling into the hands of Russians, as did the army, and from being molded into a form that would prepare the people for Russian annexation. The Government supported students at Robert College until recently, when schools were established in Bulgaria. The people display an eager spirit for education and progress.

The Army and Navy.—Military service is obligatory. The peace effective in 1884 was 17,670 men; the war effective, 52,000, of whom 36,000 constitute the field-army. Immediately after the Turkish War, while the Russians still occupied the country, the army was organized on the Russian system by Russian officers. The high pay—three times as high as they received in Russia, and twice that of the Bulgarian officers—attracted a class of broken-down spendthrifts, enjoying court patronage. Many of the Russian officers were capable soldiers; but looseness and dissipation among them were objectionable to the steady Bulgarian farmers, and their characteristic arrogance of demeanor and the influence they pretended to exercise in political affairs, in addition to the costliness of the arrangement, afforded strong motives to the democratic and independence-loving Bulgarians to free themselves from the dangerous tutelage of their liberators.

Bulgaria was divided, by a decree for the reorganization of the army, issued in October, 1884, into 4 districts, each with its brigade of 6 battalions of infantry, armed with the Berdan rifle of the Russian army. The artillery consists of 6 batteries of 4 guns, a mountain-battery, and a battalion of fortress artillery at Rustchuk. A corps of engineers was organized, consisting of railroad troops, sappers, and pontoniers. The cavalry consists of 2 regiments armed with Berdan rifles. The strength of each *duchina*, or battalion of infantry, is 700 men in peace and 1,000 on the war footing. Each cavalry regiment contains 4 *sotnias* of 600 horses; there is besides the Prince's body-guard of 200 sabers. The period of service is two years for the infantry, and three years for the cavalry and artillery. When the reserves are called out, the number of battalions is doubled. Under the tuition of the Russian officers the troops acquired the Russian tactics and discipline to perfection. At first the only native officers were such as had been educated in Russia and had served in the Russian army. A military academy was established in Sofia, and the young Bulgarians trained to replace the Russian officers are scarcely inferior to them in attainments and efficiency. In July, 1885, all the lieutenancies and one half of the captaincies were filled by Bulgarians, 420 in number, the remaining captaincies and the higher commands in the line and all the staff appointments being still held by Russian officers, 180 in number.

In the beginning of September the Bulgarian Government intended to dismiss another batch of Russian officers and replace them with sons of the country. On this point a conflict broke out between the Russian representatives, the agent Kajander and Prince Cantacuzène, the War Minister, and the Bulgarian Government. The Minister of War objected, ostensibly in the interests of the service, and threatened to resign. The Bulgarians demanded the completion of the change, not only on grounds of economy and for the sake of seeing their countrymen in the higher posts, but in order to prevent another Russian *pronunciamiento* like that of two years before. Karavelow declared that he would take the portfolio of Military Affairs himself, and intimated that if a military *coup d'état* were attempted he would not hesitate to hang half a dozen of the leaders. This conflict and a similar one in Eastern Roumelia were the immediate cause of the Eastern Roumelian revolution. A truce was struck after four new Bulgarian captains were commissioned; but subsequently the programme of the ministry was carried out, and 40 Bulgarians were promoted to captaincies. Prince Cantacuzène and most of the Russian officers in the higher posts were ordered home to Russia after the declaration of union, leaving the Bulgarian army without staff-officers or commanders.

The Eastern Roumelian military establishment was limited by the organic statute to a standing force of 6 companies. On the war footing, however, the Roumelian army comprises 12 battalions of infantry, 2 *sotnias* of horse, and 2 companies of artillery and engineers with 4 guns, numbering altogether 10,800 men. In the militia the province can count on a large and well-trained force that brings up its strength nearly equal to that of Bulgaria. The militia, which numbers 40,000 men, was organized originally under the name of gymnastic societies. These volunteers were disbanded by the Turkish authorities, but they were secretly revived and trained and armed so as to form an effective reserve.

The Bulgarian fleet consisted in 1884 of 3 ships of war, 4 steamers armed with guns of small caliber, 1 steam cutter, and 3 transports, and had 12 officers and 205 seamen.

The Bulgarian Revolution.—Since the beginning of 1885 the Balkan lands have been agitated with the expectation of important events. This restlessness was, as usual, connected with the exigencies of Russian state-craft. The danger of a Macedonian insurrection or of a union of the two Bulgarias became imminent whenever an Anglo-Turkish alliance seemed likely, and even Albanian disturbances were not unrelated to that question. In Bulgaria Slav committees renewed their activity, which has abated since the current set against Russian tutelage. The Russians are credited with a scheme for the formation of a Great Bulgaria, the replacement of the Battenberg prince by Prince Waldemar of Denmark, a dynastic revolution in Servia and the establishment of Peter Karageorgevich on the throne, and the federation of the Balkan states under the headship of Servia. The people in Bulgaria and Eastern Roumelia were assiduously prepared for the long-awaited union. In both the feeling toward Russia was that of gratitude, but of anxiety and suspicion at the same time. Since the beginning of the reactionary era in Russia the Bulgarians dread the idea of Russian annexation. This feeling has much to do with the spread of Austrian influence in the Balkan countries. When Aleko Pasha was Governor-General of Eastern Roumelia two parties formed themselves, one called the Conservative and attached to Russia, and the other called Liberal. Aleko Pasha identified himself with the latter and curried favor with Austria, going so far as to insult the Russian consul, Kredel, and thus bringing about his own extinction. He refused to comply with the demands of the Czar's Government for the armament of the militia with the Russian rifle, the arm that had been introduced in Bulgaria not without question, and the organization of the force by a Russian general. Sharp reproaches on both sides and a diplomatic rupture were the result. Gavril Pasha, who was selected by the Russian Government to follow him, dismissed Liberal officials by wholesale to make room for Conservatives, although under Aleko Pasha both parties were fairly dealt with in the distribution of offices. These changes were borne with as long as they were confined to the civil service; but when army officers began to be dismissed for their politics, a Major Nikolaieff and other Liberal officers banded together and worked upon the feelings of the troops. They met by night, and evolved a scheme for a military insurrection, having for its object the union of the two Bulgarias. The hope of a union under Russian auspices was no longer encouraged by the agents of the Czar; but the desire was awakened and the people were ripe for the change, which appealed not merely to sentimental and patriotic impulses, but to the material interests of the stolid and practical Bulgarian peasantry. The customs frontier was a hindrance to trade, and the expense of two governments was felt to be a needless burden. Karaveloff, when he knew of the disaffection in the Roumelian army, conceived the project of a Bulgarian union without the help and countenance of Russia. Russia herself could not well repudiate a consummation that was the object of the avowed policy of her Government and of the earnest wishes of the Russian people, while the other powers must view more favorably independent Bulgarian action. They vetoed the Russian plan of a Great Bulgaria at the

Berlin Congress, in order to prevent a prolonged Russian occupation and the consequent absorption of the country by the Muscovite Empire; yet they constituted a separate province of Eastern Roumelia as a step toward its ultimate amalgamation with an independent Bulgaria. If the union was accompanied by a completer emancipation from Russia, the powers could not complain at the infraction of the letter of the treaty to accomplish its purpose. The Prime Minister convinced Prince Alexander of the opportuneness of the moment, and of the wisdom of strengthening his position in the affections of the people by heading the national movement, and of seeking a European sanction in place of the good-will of Russia, which he had already lost by adopting an independent policy.

Though hastily planned, the revolution in Eastern Roumelia was accomplished with a completeness that proved the unanimity of the popular desire for union as well as the efficiency of its organizers. On the 18th of September the whole populace of Philippopolis rose against the Government; Gavril Pasha was seized, and during subsequent events confined as a prisoner at Sofia. It was therefore impossible for him to make the formal application to the Porte for military assistance that the treaty prescribed. A provisional government was constituted, under the head of M. Stransky. The oath of allegiance to Prince Alexander was taken by the militia. Strategic points on the frontier were occupied, bridges blown up, and the telegraph lines leading into Turkey were cut. Prince Alexander issued a proclamation declaring the union of Bulgaria and Eastern Roumelia, and proceeded to Philippopolis, where he recognized the provisional government and appointed Dr. Stransky commissioner. The Bulgarian army was mobilized and a corps sent to the Roumelian frontier. The Porte issued an identical note to the powers protesting against the violation of the Berlin Treaty. A levy in mass of all able-bodied Bulgarians between eighteen and forty years of age was ordered. The powers admitted the right of the Sultan to intervene with his army. Prince Bismarck, however, warned him to "beware of casting petroleum on the flames." Gen. Dragalski, commander of the Roumelian militia, was arrested. The Governor-General, Crestovich, officially called Gavril Pasha, was the only other officer deprived of his liberty, but all the Russians in the Roumelian service were dismissed. One of the principal grievances of the Eastern Roumelians was the costly official establishment imposed upon them by the organic statutes, numerous heads of departments drawing high salaries, and a multitude of sinecures. The heavy sum paid to Turkey yearly was another burden they wished to escape, and the debt, which had grown to 400,000 Turkish pounds. Their attitude toward Turkey was studiously conciliatory. The restlessness in Macedonia earlier in the year, though fomented by Macedonians in Eastern Roumelia and Bulgaria, was discouraged by the Bulgarians, and now their whole influence was put forth to prevent a Macedonian rising, with which, however, they threatened the Turks if they should attempt to reverse the revolution by force of arms. There was not a case of molestation of Mohammedans in Eastern Roumelia. The revolt was so timed that the religious festival of Bairam interfered with Turkish action. A division of troops sent into Eastern Roumelia the first day might have frustrated the *coup d'état*, but afterward the Porte, though it might easily have broken down the resistance of the Bulgarian army and the Roumelian militia, and have occupied the Balkans with Turkish garrisons, could not undertake an armed intervention without risking insurrections in Macedonia, Thrace, Epirus, Albania, and Crete, invasions from Servia, Greece, and Montenegro, the interference of Austria and Russia, and the loss of all its European provinces. In its aspect of a movement for emancipation from Russian control the Bulgarian union created a barrier between Russia and Constantinople, and was to that extent an advantage to Turkey. The neglect of the Turkish Government to erect fortifications and maintain troops in the Balkans and on the Eastern Roumelian sea-coast, a right reserved by the Treaty of Berlin, indicates how little importance Turkey attached to her nominal sovereignty over the autonomous province, which passed as completely out of her control and jurisdiction as Bulgaria.

Prince Alexander issued a circular, announcing the union. He declared that he accepted the election of the people in no spirit of hostility to Turkey, but that he acknowledged the suzerainty of the Sultan and held himself responsible for the public security. He called upon the powers to intervene in order to recognize the union as an accomplished fact, declaring that otherwise the people were determined to do everything in their power to uphold the union. He telegraphed to the Czar, begging him to grant his approval to the union and to extend his protection to united Bulgaria. A deputation was sent to Constantinople to conciliate the Sultan, and another to lay the case before the Czar, who was visiting in Copenhagen. The emblems of Turkish sovereignty, torn down by the people of Philippopolis on the day of the *coup d'état*, were restored by order of Prince Alexander. Bulgarian troops entered Philippopolis on the 24th of September. The Bulgarian Assembly voted 125,000,000 francs for the purpose of carrying out the programme of unification. Prince Alexander addressed a telegram to the Czar in which he offered to abdicate the throne if his person was held to stand in the way of Bulgarian unity, and if Russia would allow the Russian officers to remain in the Bulgarian army and undertake to effect the union without him. After meeting the Bulgarian cavalry at Philippopolis, on the 24th, he proceeded to the Turkish frontier, where the Roumeliotes had established a line of fortified camps. Armed bands of Bulgarians and Servians who prepared to invade Macedonia were ordered to return to their homes. Stringent measures were taken to suppress a Servian agitation, and the jails and fortresses were filled with imprisoned Servians. On Oct. 2d Bulgarian troops occupied the port of Boorghas, on the Black Sea, and sank torpedoes in the harbor.

Prince Alexander addressed an autograph letter to the Czar and to the Emperor of Austria, in which he assured them that he was surprised by the events in Eastern Roumelia, and had felt impelled to sanction with his name what others had accomplished. The Czar answered, through M. Kojander, that, without doubting the word of the Prince, he regretted the adventurous policy upon which the latter had embarked, and that the Russian Government would take measures to prevent the recurrence of such surprises.

Servian Action.—King Milan hastened to Vienna and declared that he dared not remain inactive, that his people would rise against him if he folded his arms and allowed others to seize Macedonia. He insisted upon a new equilibrium being established in the Balkans if the Bulgarian union were suffered to remain. Orders were issued for the mobilization of the Servian army. The Austrian ministers warned him against precipitate action, and declared that the powers would restore any territory he might seize; but they promised that, if the aggrandizement of Bulgaria should be sanctioned, Servia would not be permitted to suffer, but would be given compensation. By the order of Sept. 22 the first ban of 60,000 troops was mobilized. The Skuptschina was convoked to a special session. The liberty of the press was curtailed. At a meeting of the leaders of all parties in Belgrade it was resolved to defend by force of arms, if necessary, Servia's claim to northern Macedonia, the still Turkish portion of the old empire of Servia that had its capital at Novi-Bazar. An agreement was entered into by the sovereigns of Servia, Greece, and Roumania not to permit Macedonia to pass into the possession of Bulgaria in any case.

The Skuptschina was opened by King Milan on Oct. 1 in a speech declaring that the security of the Balkan states had received a shock, and that measures to preserve the interests of Servia would be presented for a speedy decision. The sittings were secret. The Skuptschina separated on the 4th, after adopting all the measures proposed by the Government. One was for a war loan obtained by pledging the tobacco monopoly, and subsequently increased to 25,000,000 francs. Another was the immediate extension of the railroad to the Turkish frontier.

Servian aspirations were directed at first exclusively toward Old Servia. The chief fear of the Servians was lest Bulgaria, strengthened by the addition of 50 per cent. to her territory and population, and thus overshadowing Servia in power and importance, would at some future time annex Macedonia and the Vardar valley, and, by shutting Servia off from the Ægean Sea, doom her to a state of dependence and decline. The population of Macedonia is in race more Bulgarian than Servian. In the south the sympathies of the Slavic and Greek population were with the Porte rather than with any of the three aspiring Christian states. Servia's aim was not so much the acquisition of the "holy places" of her past glories, as of the strategic command of Salonica, conferred by the possession of the mountains south of Prisrend. Compensation in the form of the cession by Bulgaria of the district of Widdin or of part of the Sandjak of Sofia, districts which Servia claimed in 1878 and on account of which animosity toward Bulgaria has been evinced recently, was deemed inadequate and unsatisfactory at this stage of the Servian ferment.

By the 3d of October the last ten annual classes of the army were under arms, represented on the rolls by 53,000 troops. The Government possessed 100,000 stands of the new infantry arm—a modification of the Mauser rifle. The last three classes only were trained in its use. The military preparations were completed by the middle of October, and the army was at Nish ready for action.

If the veto of Austria restrained the Servians from breaking into Old Servia in the first flush of patriotic excitement, the presence of an army of Turkish veterans in Uskub was an equally potent restraining cause later. The warlike ardor of the Serbs was the more inflamed against the Bulgarians, who, without the long struggle and the heavy sacrifices of the Servian nation, but by a series of lucky accidents, capped by the hardy impertinence of trampling under foot the treaty that was the charter of their national independence, to respect which Servia had stifled her aspirations, now threatened, not only to wrest from Servia her hard-won prestige, but to doom her national life to slow suffocation and final extinction. While the ambassadors were consulting in Constantinople and seemed likely to ignore the Servian demand for compensation, which was advocated by the Austrian representative, King Milan issued a circular note in which he declared that he could not restrain the martial impulses of his people, and that he must either go to war or lay down his crown. This announcement was followed by the breaking up of the camp at Nish and a simultaneous advance in the direction of Bulgaria and Old Servia. One army marched toward Pirot under the personal command of the King; the other concentrated at Leskovatz.

Greek Preparations.—In Greece the same ground was taken as in Servia with regard to the accession of territory for the purpose of balancing the addition to Bulgaria and of restoring the equilibrium between the Balkan states. The people were eager for action, as usual, and held demonstrations in favor of an advance into Thessaly and Macedonia. The warring parties united to hold up the arms of the Government in the advancement of Hellenic interests. A recent order for the reduction of the military establishment was recalled, and, as soon as the King, who was returning from abroad, could sign the decree, the reserves were called out. On the 25th of September a force of 17,000 regular troops began to concentrate on the Thessalian frontier, and a corps of 5,000 reserve troops was formed. Reserve forces, besides, were collected at Larissa and Arta. A circular was dispatched urging the powers to enforce the Berlin Treaty, and declaring that otherwise Greece would take measures to protect her interests. By restoring the forced circulation of paper, the Government raised from the Greek National Bank a loan of 24,000,000 drachmas (francs) and 6,000,000 drachmas from the Ionian and Thessalian banks. Large orders for war material were given in foreign countries. On Oct. 4 the Austrian, English, and Russian ministers had an interview with the King, and impressed upon him the necessity of moderation. On Oct. 10, in spite of remonstrances from the representatives of all the powers, King George signed a decree for the partial mobilization of the reserves. A few days later orders were given for mobilizing all classes of the army and reserves.

Action of the Sublime Porte.—The Turkish Government, pending the answer by the powers to its protest against the rupture of the treaty and request for advice, looked after its neglected armaments and called out the redifs. In the circular to the powers, dated Sept. 23, the Porte expressed the intention of exercising its rights under the article of the treaty that empowers Turkey to occupy Eastern Roumelia with Ottoman troops in the event of external or internal dangers, after first notifying the signatory powers. Troops were moved on to Salonica and to other posts in Macedonia and on the Roumelian frontier. The Roumelians attempted to blow up a bridge over the Maritza river, but were prevented by the arrival of a body of Turkish troops, with which they had a skirmish.

On the 29th of September a skirmish took place at Mustapha Pasha, a town on the Roumelian frontier, twenty miles northwest of Adrianople. The Turks fired upon the Roumelian outposts, which were immediately reenforced, and the attacking party retreated.

When the two Bulgarian delegates, who were sent to assure the Sultan that order reigned in Eastern Roumelia and that his sovereignty was secure, applied for an audience at the Yildiz Kiosk, they were placed under arrest and subjected to an official examination. They were subsequently released, and their message was received by the Turkish Government.

The Turkish ministry was reconstituted by the Sultan on the 24th of September. Kiamil Pasha, previously Minister of the Vakoufs, became Grand Vizier in place of Said Pasha; Munir Pasha was transferred from the Ministry of Finance to the Interior. Sureya Bey was made First Secretary of the Palace; and Ghazi Osman Pasha was dismissed from the War Office, which was placed under the direction of Ali Saib Pasha, of the artillery. The Ministry for Foreign Affairs was given to Said Pasha, previously ambassador at Berlin.

About the 6th of October troops began to be massed on the frontiers of Eastern Roumelia and Servia and Montenegro. Explanations were demanded of the warlike preparations of the Servian Government and from the Greek Government respecting the collection of troops on the frontier, the Porte declaring that it would also send troops to the frontier if the movement of Greek troops did not cease.

The Turkish military establishment was found to be in a sorry state of unpreparedness and confusion. Under the administration of the late Minister of War, Ghazi Osman Pasha, the distinguished defender of Plevna, large sums of money appropriated for the army were diverted to other purposes. The Adrianople army, which should have numbered 15,000 men, was discovered to have only one half that strength, and was unprovided with uniforms and poorly shod. The cavalry was unable to march for lack of horses and equipments. The available ironclads were ordered to make ready for sea, but the coal-supply was short. Four Austrian Lloyd steamers were engaged as transports, and four war-vessels were fitted up for the conveyance of troops from Smyrna and the neighboring ports to Salonica and Dedeagatch, the terminus of the Adrianople - Philippopolis Railroad, whence they could be forwarded by rail to the Roumelian and Servian frontiers. Troops were drawn from Crete, but the excited state of the island moved the governor to ask for their return. By the 10th of September 180 battalions of 700 men, in all 120,000 troops, were mobilized. The second ban of redifs was then called out and two other steamers of the Austrian Lloyd were chartered. Two large armies were formed: one at Adrianople, ready to advance into Roumelia if the powers failed to secure a peaceful arrangement; and one at Uskub, where it could check any movements of the Servians or Montenegrins or could march upon the Bulgarian capital, about ninety miles distant. The Seraskierate was supplied with means from the proceeds of the tithes. The troops sent into the field were supplied with new uniforms, and their maintenance and comfort were carefully attended to. When the mobilization of the first ban and a part of the second ban of reserves was completed, about Oct. 18, 200,000 men were under arms and 500,000 livres had been expended, not counting the contract sum for the transport steamships, amounting to 1,500,000 livres more.

The Minister of War reported that 6,000,000 livres Turkish would be required to keep the army in the field six months. A loan of £2,000,000 was negotiated with an English syndicate that had before applied in vain for railroad concessions. On Oct. 31 the Seraskier issued an order to stop all further mobilization. The official report made to the Sultan stated that Turkey possesses under arms 430,000 men, all well equipped, armed, and clothed.

Attitude of the Great Powers.—Both Russia and Austria seemed to be taken by surprise at the Bulgarian revolution. The Russian people manifested great exultation, but the feeling was damped by the disapproval shown by the St. Petersburg authorities. All the cabinets were impressed with the necessity of bringing the matter before the European Areopagus, and of preventing the spread of the disturbance over a larger area by the speedy interposition of the powers. Russia was in favor of an immediate conference, but wished the proposal to emanate from the Porte, as in propriety it should. It soon became apparent that the views taken of the Bulgarian events by the different cabinets were too divergent to admit of a rapid decision. Russia desired to recognize the accomplished fact of the union and to condone the revolutionary exercise of the Bulgarian popular will, but to depose Prince Alexander as a contumacious violator of the treaty. The Austrian Government was inclined at first to favor this solution, deeming that Prince Alexander had treacherously broken a promise recently given to M. de Giers, at Franzensbad, that he would answer for the tranquillity of Bulgaria. Count Kalnoky and the Emperor judged him more leniently when they learned that he had taken his decision hastily, and that Minister Karaveloff had presented to him the alternative of heading the popular movement or of abdicating. The Berlin Government expressed stern disapproval of the course of the Prince of Bulgaria. The Western powers were less disposed than the two central European empires to acquiesce in a scheme to further Russia's designs on Bulgaria and facilitate her advance to the Dardanelles; a circumstance that seemed to indicate that in the conclaves of the triple alliance a delimitation of the Russian and Austro-Hungarian spheres of interests in the Balkan Peninsula had been reached. The plan for a conference was abandoned, at the suggestion of Prince Bismarck, in favor of a preliminary meeting of the ambassadors at Constantinople for an exchange of views. The informal conference of the powers held its first meeting on Oct. 4.

The first act of the conference was to send a message to the Sultan, saying that the powers condemned the violation of the treaty by the Prince of Bulgaria, and that they commended the pacific attitude observed by the Porte. On Oct. 15 the ambassadors sent a collective note to the Bulgarian Government, warning Bulgaria to refrain from hostility, and declaring that she would be held responsible in case peace should be disturbed through her menacing attitude. The final outcome of their deliberations was a memorandum presented to the Porte on Oct. 13, in which they said that more time would be necessary to obtain a complete European understanding. They advised the Porte to continue its peaceful policy, though they recognized the prerogative of the Sultan to send troops into Eastern Roumelia.

This reply of the powers to the original Turkish note was answered two days after it was communicated to the Porte. The Turkish Government expressed itself as equally desirous with the powers to avert bloodshed, and engaged not to undertake military coercion until the powers should try to re-establish the *status quo ante*, yet it would be impossible to delay active proceedings long, owing to the heavy military expenditure.

In the conference Russia urged the deposition of Prince Alexander and the recognition of the union as a *fait accompli*. When she found no support for the first proposition, she joined Turkey in demanding the restoration of the *status quo ante*. Germany and the other powers accepted the Russian idea in principle, for the purpose of debarring Servia and Greece from raising claims for compensation. England was in favor of a formal restoration of the *status quo ante*, but of conceding the union under conditions that would deprive the act of the character of a condonation. France sided with this view, while Italy stood by the triple alliance. Austria insisted on giving compensation to Servia out of Bulgarian territory. The Western powers were willing to agree to a rectification of the Bulgaro-Servian frontier, but Russia set her face against the smallest cession of Bulgarian soil, and Germany supported Russia in order to preserve the triple alliance. The other powers objected to compensating Servia with a slice of Turkish territory, a solution that was also repugnant to Austrian desires. As Russia stood firm in her contention for the restoration of the *status quo ante*, Austria, following the lead of Germany, consented to this proposal for the sake of preserving the Kremsier compact, though the interests of the German powers in the recognition of the *fait accompli* were direct, and those of the Western powers, who subserved their interest in effectively opposing the abrogation of the union, were principally sentimental. A compromise in favor with the other powers was the personal union of Bulgaria and Eastern Roumelia, Prince Alexander succeeding Gavril Pasha as Governor-General. The Servians denounced this project as a deception, and the Roumeliotes raised their voice against the restoration of the organic statute. The satisfaction proposed to be rendered to Turkey by Bulgaria was the settlement and regular payment of the tribute, hitherto evaded, and the assumption of the debt and contributions due to Turkey from Eastern Roumelia without reduction.

When Servia threatened to begin a war of annexation in the north, the Porte formed a secret understanding with Greece, and was thereby relieved of apprehensions of an invasion of Macedonia from the opposite quarter. This agreement was based on the restoration of the *status quo ante.* The new ministers, like those they had displaced, were not entirely agreed as to the policy to be pursued. In itself the recognition of the *fait accompli* in Roumelia presented advantages to counterbalance the impairment of Turkish prestige and the loss of the strategic frontier of the Balkans, to preserve which was the ostensible ground for originally dividing Bulgaria; yet the menaces of the other Balkan states, and the fear that some of the great powers aimed at ulterior combinations, convinced the Turkish statesmen that the safest course would be to insist on the restoration of the *status quo.* Montenegro put her army in a state of preparation also. At a late moment Roumania advanced her claim for compensation, demanding that her frontier should be shifted south of the Danube, so as to inclose Silistria, Batdajek, and Baltschuk.

In the note of the powers to the Bulgarian Government they invited the leaders of the Bulgarian forces to avoid all concentration of troops on the Roumelian frontier, and to suspend their armaments.

The collective note of the ambassadors reached Prince Alexander at the time when Servia threatened the defenseless frontier of Bulgaria, and when signs of insubordination and discontent appeared among his troops on the Roumelian frontier, who, deprived of their Russian commanders, were subject to disorganizing influences. He dispatched a supplemental note to the powers, saying that he would defer to their advice, and then ordered the withdrawal of the Bulgarian forces in Eastern Roumelia. The menacing attitude of Servia was assigned as another reason for their recall.

When the inconclusive memorandum was drawn up as the only result of the informal conference, Russia proposed a conference on the basis of the Treaty of Berlin, and was supported in the proposal by Austria and Germany. Great Britain objected to the form of invitation proposed. When an agreement was obtained in this regard, the Porte issued a call for the conference on Oct. 20. The first meeting of the plenipotentiaries took place Nov. 5. (See Roumelia, Eastern, and Turkey.)

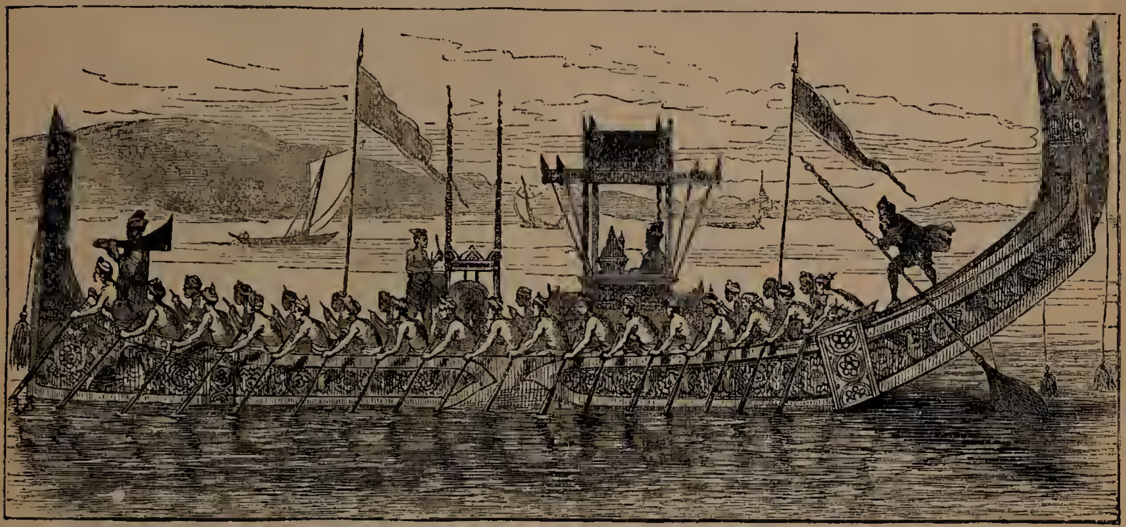
Servian Military Movements.—On the 15th of October the Servian troops advanced to the Bulgarian frontier near Sharkhoi. It was feared that the Bulgarian capital would be taken by a *coup de main*, as there were few troops and no heavy artillery near. Four battalions were sent to hold the Dragoman Pass. Prince Alexander issued a decree calling out all the reserves. The Austrian Government admonished the Servian King that it would be useless for him to expect support from Austria. At the same time the transportation companies of Austria and Hungary were directed to prepare for the conveyance of troops. A large body of Turkish troops was moved to the Servian frontier.

On the 18th, Servian troops occupied the Kosiak Pass on the Jerma River, situated on the Macedonian frontier, partly in Bulgaria and partly in Turkish territory. On the 24th they crossed over into Bulgarian territory near Widdin, but afterward withdrew. Skirmishing between pickets took place. The defensive positions were strongly held by Bulgarian troops when the Servians advanced to the frontier. Servia's supposed plan was to seize the Widdin district and the territory inhabited mainly by Serbs, extending to the Isker river, which debouches into the Danube twelve miles west of Nokopolis. The second ban of reserves was called out on Nov. 3. While King Milan held his headquarters at Pirot, threatening a blow at Sofia, another column was formed under the command of the Prime Minister, M. Garachanin, ready to cross the Timok and occupy the Widdin district. The Bulgarian Government concentrated a large body of troops and its Danubian fleet near Widdin. Notwithstanding her menacing declarations and warlike movements, Servia did not suffer any serious results to grow out of her military demonstration pending the decision of the powers, while the Bulgarian authorities were equally studious to avoid a collision. (See Servia and Roumelia, Eastern.)

BURMAH, a kingdom in Farther India. Previous to 1825 it was a large and powerful empire, but the annexation of the seaboard provinces and the mouth of the Irrawaddy by Great Britain, and the encroachments of the semi-independent Shan states, have left the kings of Burmah but a small fragment of their former dominions. Most of the tributary states that remained in the last reign have declared themselves independent since the accession of the present King. Burmah has an area of about 67,000 square miles, including the dependent Shan states. The population of Burmah proper is estimated at 1,075,000, that of the northern Shan states at 600,000. The eastern Shan states are more populous. The population is composed mainly of Burmese and Shans, but with them are mingled a great variety of other races, such as Khyens, Kakhyens, Kathays, Yinnees, Yinnets, Yinbans, Karennees, Paloungs, and Chinese and Hindus settled in the towns. The soil is very productive, and the people are happy and comfortable, extremes of poverty and wealth being unknown; but they are burdened with a system of government that makes every man the slave of the monarch, liable to be called upon for any service, and also with the support of a host of mendicant Buddhist monks. There is a large class of slaves, outcasts, and debtor bondsmen. The Government is an absolute monarchy. The King is advised by a public council and by a privy council, the members of both of which are appointed by him. The capital, Mandalay, is a place of about 60,000 inhabitants. Bhamo, at the head of navigation on the Irrawaddy, has about 2,500 inhabitants. Amarapoora has a population of nearly 90,000. Though less fertile than British Burmah, the country produces rice, maize, wheat, pulse, indigo, cotton, and tobacco, and many fruits, while the forests yield a great variety of valuable timber. Iron is found in large quantities, besides tin, copper, plumbago, gold, silver, nitre, bismuth, jade, and other minerals. The only mineral that is worked to a large extent is petroleum. The wells are a strict monopoly. The chief exports are petroleum, nitre, lacquer-ware, hides, cutch, sesame seed and oil, cotton, sugar, grain, jade, and tamarinds. The river-trade is mostly in British hands. Oppression and heavy taxation cause a steady emigration into British Burmah, which has received an accession of 340,000 inhabitants from Upper Burmah in spite of the efforts of the Burmese Government to stop the tide of emigration.

The British Resident at Mandalay was withdrawn in 1882 in consequence of a quarrel with the Burmese Government. The King is Thebaw, born in 1858, who, in order to render his tenure secure, attempted to assassinate his male relatives upon his accession in 1878. The British in India desired to make of the internal disorders of Upper Burmah and the vices and cruelties of the young King a pretext for annexing the territory in order to develop a trade-route to southwestern China explored by Mr. Colquhoun. There were four claimants for the throne living in India, Thebaw's two brothers, the Nyoungyan and Nyoungoke princes, and the Mingoon and Mingoon Mintha princes. The efforts of the French to open the Songkoi route to Yunnan prompted the Indian authorities to seek to establish a rival route for British trade. The more deeply France became involved by her exertions and sacrifices in Indo-China, the more the idea gained ground that it was necessary to have a "cushion" between French and British possessions in Asia. This idea was not based on the supposition of danger to British rule in India, as in the Afghan question, but on the ground that the French and English commercial systems differ so greatly that too close a neighborhood would lead to friction and disputes. Such a cushion would be formed by a union of Siam and the Shan states, lying between the French colonies and protectorates and British Burmah united with Upper Burmah.

A treaty between Great Britain and Burmah expired in 1877. The principal grievance of the English against the King was that monopolies of internal trade were granted to Chinese, Parsees, and other foreigners, not Englishmen. The steamboat traffic, the forest industry, and other important monopolies of foreign commerce were in the possession of English companies. The chief hindrance in the way of concluding a new treaty with Thebaw after his accession was the refusal of the Indian Government to allow the importation of arms into Burmah. The new Mandalay Government resisted the imperious demands of the English Resident, and objected to his interference in various internal concerns of the kingdom. He finally took his departure on the ground that the King refused to receive him in his boots, as an equal, but expected him to put on slippers in the antechamber. The rupture did not lead to armed intervention and annexation, as was desired by the local British authorities. The English Government became involved in difficulties elsewhere, and so was the less likely to yield to pressure from Rangoon and Bombay and begin another "little war." The scheme of a railroad into China was discussed before the public, and every fresh sign of weak-



STATE BARGE OF BURMAH, FROM A NATIVE DRAWING.

ness and disorder in Burmah, every new outbreak of rage or folly on the part of the dissipated monarch, evoked repetitions of the demand for the annexation of the territory. Meanwhile English commercial interests were content with maintaining a standing quarrel with the Mandalay Government, and waited for the exploitation of Upper Burmah and the advantages of the trade-route until matters should come to a head. The restrictions placed upon English traders by the establishment of monopolies, the withdrawal of the British consuls at Mandalay and Bhamo, the abolition of mixed courts, and the general stagnation resulting from the tyranny and misrule of Thebaw, caused a large decline in the trade with British Burmah, though an improvement has taken place since 1862. In 1884 there was an increase in the exports of cattle, hides, jaggery, timber, and silver, but a decline in cutch, oils, and silk. There was also a large increase in the imports of rice to make up for a deficiency in the crop.

Connected with the schemes for taking independent Burmah under British administration and building a railroad was a newly started movement for the separation of British Burmah from India. The chief object was to set free for these projects the surplus revenue of British Burmah, amounting to fully a million sterling.

Conflict with Great Britain.—The over-acuteness of Thebaw's advisers, and the colonizing zeal of M. Thomson, Governor of French Cochin China, hastened the blow that they sought to avert. Thebaw's strong-minded Queen and other advisers thought they could save the kingdom by creating French interests to balance the English. The French officials at the same time deemed that England's perplexities in Egypt, and subsequently in Afghanistan, left open the way for the extension of French influence over the Indo-Chinese peninsula, and the advancement of the project of a new French East India. The beginning was made by the high-handed reduction of Cambodia to French control. Overtures were made to the King of Siam, who has equally to fear French and English aggression. Burmah is separated from the French possessions by 500 miles of territory inhabited by independent Shan tribes; but Burmah presented the unusual spectacle of a native state desiring French protection, and offering valuable privileges to French enterprise voluntarily. The English renewed the agitation for the deposition of Thebaw and the annexation of Upper Burmah. Yet, as they feared to be anticipated by France, not so much in Burmah as in Siam, the project of a railway was altered so as to carry the route into China, around Burmah, through Bangkok. This route, surveyed by Messrs. Hallett and Colquhoun, is less difficult than those passing through the mountainous parts of Burmah and Yunnan, and traverses a much more populous and prosperous country. Influential Siamese statesmen favored the guarantee by the King of the Siamese section, provided the connecting line was guaranteed by the Indian Government.

The Mandalay authorities ceased conferring trading and industrial privileges upon Englishmen, and offered every inducement to capital and enterprise from Continental Europe, and particularly from France. In the latter part of 1884 a treaty of alliance and friendship was negotiated between the King of Burmah and the colonial authorities of Cochin China. It provided for the establishment of a French Consul at Mandalay. M. Haas was appointed to that office, and he, in conjunction with M. Thomson, entered eagerly into Thebaw's

A BURMESE COLONEL.

scheme for escaping from his dependence on the English by granting concessions and monopolies to French syndicates, and thus establishing large French commercial interests in Burmah. On April 13, 1885, a concession was granted for a land bank that should have the exclusive right of advancing money on crops or lending on mortgage, and of receiving deposits at interest. The King desired to revoke the privileges of one of the largest English monopolies, the Bombay and Burmah Trading Company, in order to transfer them to French *concessionaires.* This company holds leases of the teak-forests of Upper Burmah, and has been in the habit of advancing money to the King. It declined to make an advance that the King wanted for a court festival. A suit was brought against the company by a number of Burmese foresters for wages. In the course of the trial it was brought out in evidence that the company had removed over 50,000 teak-logs without paying the royalty. The corporation was ordered to pay the duties, with a penalty added, making the sum of nearly $1,250,000. The judgment of the Court was followed by an order directing the confiscation of the company's property to the extent of the claim upon default. The company denied the accusation, and charged that the entire proceedings were factitious, and the evidence forged. It appealed to the Indian Government, which sent a remonstrance and requested the suspension of the decree. To this a slighting and evasive reply was returned.

A treaty was drawn up between the French representative in Mandalay and the Burmese Government, by which, in return for the capital advanced by France to establish the bank at Mandalay, Burmah was to grant her the control of the customs revenue from the tea-trade and the working of the famous ruby-mines. France, moreover, obtained an exclusive concession for the construction of railroads, and, as security for the capital, received control of the customs on the Irrawaddy. The interest on the line from Mandalay to Tonghoo, on the border of British Burmah, was guaranteed by the King. While a Burmese envoy, Thangyet Woon, was on the way to Paris with this treaty, the British made preparations to proceed to the long-deferred armed intervention. The dispute with the timber company afforded as good a pretext as any other for a demonstration intended to warn France. In September a British corvette was sent to Rangoon. The reasons for interposition were commercial rather than political. French supremacy in Burmah was not much feared, but it was considered important to prevent private vested interests being established by Frenchmen, which would deprive the political reversion of its lucrative value to English capital. In such a cause the British Cabinet, being in the position of an *interim* Ministry, were not easily persuaded by Lord Dufferin to initiate an aggressive policy that might lead to considerable expenses or unforeseen complications. An ultimatum was sent to the Mandalay Government in the middle of October, a gunboat was fitted up for service on the Irrawaddy, and 5,000 troops were collected on the frontier of Burmah. Thebaw concentrated his forces on the frontier, prepared to resist the British invasion, and prepared to sink ships to block the Irrawaddy. No satisfactory answer being returned to the ultimatum, Gen. Prendergast invaded Burmah with a British force. After the capture of Mandalay, King Thebaw surrendered himself. At the end of December the annexation of Upper Burmah was announced by the British Government.

The Chinese Occupation of Bhamo.—In the early part of the year 1885 the Burmese Government was involved in a conflict with China, or rather with Chinese filibusters. The Chinese had taken advantage of the disorders in Burmah to take possession of the city and district of Bhamo, on the border of Yunnan. The Mandalay Government was not disposed to submit quietly to the loss, but sent its best general with a large force to recapture Bhamo, about 3,000 men in all, but badly provisioned and equipped. The Chinese fortified Bhamo, and repelled all the Burmese attacks. It required the whole resources of the kingdom to drive the marauders over the border.

BURNABY, FREDERICK GUSTAVUS, an English soldier, killed in the battle of Abu Klea, in the Soudan, Jan. 17, 1885. He was the son of a clergyman, and was born at Somerby-Hall, Leicestershire, in 1842. He received his education at Harrow and in Germany, and entered the Royal Horse Guards as a cornet in 1859, and became a lieutenant in the same regiment in 1861, captain in 1866, major in 1880, and lieutenant-colonel in 1881. He first became famous through a ride to Khiva, accomplished amid great difficulties and perils, in 1875, of which he published a graphic account. Though he was prompted simply by a love of adventure, the Russian authorities regarded him with suspicion and complained to his superiors, who called him home before he could carry out his intention of extending the journey to Bokhara and Samarcand. In 1876 he made another trip on horseback through Asiatic Turkey, into Persia, and back again along the shore of the Black Sea, of which an account was published, entitled "On Horseback though Asia Minor." He was with Don Carlos in the last Carlist war as military correspondent for the London "Times." In 1880 he was a Conservative candidate for Parliament for Birmingham, which borough he had prepared to contest again as joint candidate with Lord Randolph Churchill in the next general election. In March, 1882, though he had no experience in aëronautics, he ascended alone in the Eclipse balloon from Dover and accomplished, not without great danger, the voyage across the Channel, descending at Envermeau in Normandy. His love of adventure led him, though a non-

FREDERICK GUSTAVUS BURNABY.

combatant, attached to Sir Gerald Graham's intelligence department, to enter the battle of El Teb with a shot-gun, and he was severely wounded. His performances were mentioned in the dispatches, and gained him the Khedive's medal. They also led to a lively discussion in the House of Commons, in which critics inquired what right he had in the battle, while his friends warmly praised his gallantry. He volunteered for the Nile expedition, and overtook Gen. Wolseley at Korti. He was given charge of a convoy of grain, and sent on in haste to join Gen. Stewart at Gakdul, with secret instructions to succeed that officer if a mishap left the command vacant, and reached the camp on Jan. 13, just before the column started for Metammeh. He commanded the cavalry in the Abu Klea, and ordered a manœuvre in the early part of the fight while laboring under a misapprehension. Through his efforts to correct the mistake he was killed before the commander was disabled. The loss of these two experienced and energetic officers left the command in the hands of men unaccustomed to direct military affairs, a circumstance that accounts for the blunders at Metammeh and the delay in bringing succor to Gen. Gordon. Col. Fred. Burnaby, in his various qualities of a dashing officer, an entertaining author, a political aspirant, a lover of daring adventure and athletic feats, a sportsman and country gentleman, and a genial man of society, was well known and popular in England.

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CALIFORNIA. State Government.—The following were the State officers at the beginning of the year: Governor, George Stoneman, Democrat; Lieutenant-Governor, John Daggett; Secretary of State, T. L. Thompson; Treasurer, W. A. January; Comptroller, John D. Dunn; Superintendent of Public Instruction, W. T. Welcker; Attorney-General, E. C. Marshall; Surveyor-General, H. J. Willey; State Engineer, William H. Hall. Judiciary, Supreme Court: Chief-Justice, Robert F. Morrison; Associate Justices, W. H. Myrick, E. W. McKinstry, E. M. Ross, J. D. Thornton, J. R. Sharpstein, and S. B. McKee.

Legislative Session.—The Legislature met in January, and adjourned in March. Reviewing the session, a San Francisco journal says:

> It has been a Legislature of jobs and combinations, of extravagant appropriations, of utter consciencelessness in its numerous small raids upon the treasury, and of blind disregard of the duties imposed upon it by the weightiest interests of the State. About the only lasting memorial of its existence will be the taxes it has imposed on the people. It has been run by cliques and cabals. A few men in each house have spent their time and their talents in contriving combinations whereby certain measures were advanced by tying them up with certain others, and more important bills smothered to death by keeping them under a mountain of chaff and trifles.

One of the most important subjects before the Legislature was that of irrigation, but no act was passed. Ex-Gov. Leland Stanford (Republican) was elected United States Senator.

General Condition.—The Governor, in his message to the Legislature at the beginning of the year, says:

> The products of the soil have been abundant, but the selling prices therefor are not as remunerative as formerly. Owing to unsatisfactory prices, our warehouses are filled with wool, wine, and cereal products, awaiting an increase in rates. While some of our industries are in a languishing condition, the purchasing power of money for nearly all necessary articles of food in our markets appears greater than for many years past. The fructifying rain has again visited the State, and we are assured of bountiful harvests, and a revival of the mining industry.

Finances.—The receipts of the State during the thirty-fourth and thirty-fifth fiscal years amounted to a sum less by $380,230.29 than the receipts of the two years preceding. The expenditures during the same periods show even a greater difference in favor of the present administration. They stand thus: For the thirty-second and thirty-third fiscal years,

$9,803,253.69; for the thirty-fonrth and thirty-fifth fiscal years, $8,591,009.62. In addition to the ordinary expenses of the government during the two years past, $163,000 was appropriated by the last Legislature for the erection of an additional building for the insane at Stockton; $40,000 was appropriated for a portion of the construction fund of the State Agricultural and Industrial Exhibition Building, at Sacramento; the Horticultural, Sericultural, and Forestry Commissions and Bureau of Labor Statistics were created, and money was appropriated therefor; appropriations were made for the Veterans' Home and the Old People's Homes, and the number of orphans, insane patients in the asylums, and convicts in the State Prisons is constantly increasing.

Keeping step with a decrease in the expenses of the government, there has been a decrease in the rate of State taxation. This rate in 1881 was 65·5 cents on each one hundred dollars valuation of taxable property; in 1882 the rate was 59·5 cents; in 1883, 49·7 cents, and in 1884, 45·2 cents, showing a steadily decreasing rate for the past four years. The present rate of taxation, 45·2 cents on each one hundred dollars, is the lowest reached in the history of the State government. The legal proceedings against certain railroads, instituted for the collection of taxes, are in an unsettled and unsatisfactory condition. An appeal to the United States Supreme Court was taken in one case, a few months since, it being stated that the one case presented all the issues necessary to be determined in order to decide all similar cases pending. But the United States Supreme Court has declined to advance the case mentioned upon its calendar, and the time at which it will be heard and determined can not be definitely stated. The Governor says: "These corporations should be made to obey the law in its entirety, or they should not be taxed at all. There is no middle ground that the State can take on this important question."

The State debt is less than $2,500,000.

In September, in several suits, the railroads made an offer to pay to the Attorney-General, in behalf of the State, the sum of $329,520.63, a stipulation being filed that such payment should not prejudice or affect any right of either party to maintain suits to recover the balance claimed by complainant. The money offered is what the railroads consider just, but what the Attorney-General considers a part payment. The suits and the amounts offered to be paid are as follow: Central Pacific, $169,685; Southern Pacific, $124,720.81; Northern Railway Company, $15,646.93; San Pablo and Tulare, $5,295.80; California Pacific, $14,172.09. The Attorney-General accepted the offer, and the court issued an order that the sum specified above should be paid over in United States gold coin to the Attorney-General of the State of California within five days. Snbsequently, during the day, the railroad companies paid to the Attorney-General their tender on the taxes of 1884. The following statement illustrates how tax matters stood in September.

Amount of taxes paid by the Central and Southern Pacific Railroad system on account of taxes assessed for the years 1883 and 1884:

To the State of California	$211,178 10
To the counties	443,120 95
Total	$654,299 05

The following-named companies belonging to the same systems had paid in full for the years 1883 and 1884 the following sums:

Stockton and Copperopolis Railroad Company	$3,878 00
Amador Branch Railroad Company	5,154 74
Sacramento and Placerville Railroad Company	9,126 35
Vaca Valley and Clear Lake Railroad Company	5,015 98
Santa Cruz Railroad Company	4,449 98
	$27,625 05
	654,299 05
	$681,924 10
Aside from the assessment made by the State Board of Equalization, the Central Pacific and Southern Pacific Companies had paid in assessments made by county assessors for the years 1883 and 1884 the sum of	$258,994 05
	681,924 10
Grand total	$940,918 15

Attorney-General Marshall then had in his hands $654,299.05 belonging to the State and counties as above set out, and about $140,000 belonging to the State and the counties of Placer, San Joaquin, and Contra Costa, collected on taxes for the year 1882, and had paid to other counties on the taxes of 1880, 1881, and 1882, about $300,000, making his total collection over a million of dollars. Of the taxes assessed by the State Board of Equalization, the railroad companies had paid in addition to what passed through Gen. Marshall's hands, about $800,000, making in all over $1,800,000, exclusive of local taxes, which amounted to about $700,000 more.

Statistics.—The following table gives the production of wool in the State:

	Pounds.		Pounds.
1871	22,187,188	1878	40,862,091
1872	24,255,468	1879	46,900,360
1873	31,155,169	1880	46,074,154
1874	39,356,981	1881	45,076,639
1875	43,532,223	1882	40,527,119
1876	56,550,970	1883	48,848,690
1877	53,110,745	1884	37,415,380

The wine-product of 1884 has been stated at 15,000,000 gallons.

According to the latest reports of county assessors, the area planted to vines in California is 120,932 acres. The State Board of Viticulture estimates the actual area of vineyards at about 150,000 acres, classified as follows: One year old, 20,000; two years, 35,000; three years, 35,000; four years, 10,000; five years and over, 50,000. The average yield per acre, according to the assessors' reports, is about three tons and a half. The product of raisins in 1884 reached 145,000 boxes. There are 150 gallons of wine to a ton of grapes.

The production of quicksilver for five years has been as follows:

YEARS.	New Almaden.	Other mines.	Total.
	Flasks.	Flasks.	Flasks.
1880	23,465	36,461	59,926
1881	26,060	34,791	60,851
1882	28,070	24,662	52,732
1883	29,000	17,725	46,725
1884	20,000	11,918	81,913

During this period the prices in San Francisco ranged from $26 to $35 a flask.

Irrigation.—On the subject of irrigation the Governor says:

> Every community has interests more or less directly staked upon success in applying waters to thirsting lands. It is clearly evident that this union of lands and waters can not be accomplished under a law which gives every dweller upon the bank of each stream the right to have the waters flow, as by nature designated, within their banks. Our Supreme Court, by a recent decision, has declared such law to exist; and while this decision is no doubt in accordance with the law as it now stands on our statute-books, it appears that a new enactment is necessary to meet the wants of our people. If the owners of the stream-channels own the waters, then there should be a law under which, after due compensation, these waters may be taken and used in irrigation. Such legislation is necessary, whether the irrigation is to be practiced alone on bank-lands or on those not bordering the streams. For, as the right to hold the water in the streams is an individual one, appurtenant to each land-owner on the bank, it is evident that one property-owner on the bank has it in his power to defeat a proposed plan of irrigation desired by the entire community in which he resides. The issue is not one between riparian claimants and appropriators of water, corporate or individual, in either case, but between the outstretched plains, from river to river, on the one hand, and the lands bordering the river-channels on the other. Shall the waters fructify our plains, or shall they be lost in the sandy beds of the stream-channels, or, flowing onward, be lost in the sea?

Charitable Institutions.—The condition of the Orphan Asylums is, generally speaking, satisfactory. The amount expended during the thirty-fourth fiscal year, for the support of orphans, half-orphans, and abandoned children, was $201,337.71. During the thirty-fifth fiscal year there was expended on the same class $205,511.49. The other expenditures for charitable purposes comprise the sum of $7,475.92, paid for the support of Old People's Homes, and $2,112.60 expended upon the Veterans' Home, making a total of $416,437.72.

San Francisco.—The principal receipts of California produce at the port of San Francisco from bay and coast sources during 1883 and 1884 were as follow:

	Flour.	Wheat.	Barley.	Oats.	Corn.	Rye.	Wine.	Brandy.	Quicksilver.
	Quarter sacks.	Centals.	Centals.	Centals.	Centals.	Centals.	Gallons.	Gallons.	Flasks.
1884	4,094,332	14,073,977	1,865,160	280,753	153,478	68,759	4,481,841	102,733	39,306
1883	5,215,112	13,541,256	1,685,440	271,325	87,884	27,900	4,909,238	131,238	46,565

The monthly exports of wheat cargoes from San Francisco from July 1, 1884, to Jan. 1, 1885, were:

MONTHS.	Centals.	Value.
July	165,995	$245,715
August	1,487,097	2,077,087
September	1,327,172	1,765,483
October	1,722,162	2,167,590
November	1,436,116	1,834.908
December	1,833,153	2,387,712
Total	7,970,695	$10,478,495
Same time, 1883	7,215,496	$12,388,227
Same time, 1882	8,948,811	15,118,327
Same time, 1881	12,504,972	20,340,859
Same time, 1880	5,913,834	8,599,955

Among the notable and increasing industries of the city is cod-fishing, which has grown from slight beginnings in 1864–'65 into a well-established business, with large capital permanently invested and employing several hundred men. The Pacific fishing-grounds are in the neighborhood of the Choumagin Islands, Alaska (about 2,000 miles from the port), in the Behring Sea (500 miles farther north), and in the Okhotsk Sea (a 4,000-mile trip). So long a voyage necessitates the employment of larger vessels than are used in the East or in Europe, and as it is necessary to carry large stocks from one season to the next, the drying and curing establishments, technically known as fish-yards, are the most extensive and costly in the world.

In 1884, 15 vessels were employed, having an aggregate tonnage of 3,340, and carrying 429 men. The catch was 1,622,000; in 1883 the catch was 1,720,000.

CAMBODIA, a kingdom in Farther India. A French protectorate was declared in 1862. Norodom, the King of the still independent fragment of the old kingdom of Cambodia, signed a treaty with the Governor of French Cochin China, accepting French sovereignty, in 1884. M. Thomson, the energetic official who forced him to accept these terms by a military demonstration, took steps to consolidate French rule in the country without waiting for the ratification of the treaty. He acted as sovereign in Cambodia, compelling the ministers to sign decrees without even understanding them. Notwithstanding the protest of Norodom, the French Government gave its sanction to the treaty, and the King submitted with ill grace and under protest. The area of the kingdom is 83,861 square kilometres, the population about 1,020,000 souls.

The Cambodian Insurrection.—Discontent at the establishment of French rule in Cambodia took the form of open insurrection and harrying guerilla warfare when the French attempted to carry out the treaties extracted from King Norodom. In January a band, led by Sivotha, the King's brother, appeared in the neighborhood of the French post of Sambaur, garrisoned by marines and Annamite sharp-shooters. The commander who went out to reconnoitre never returned. The post was shortly afterward attacked, and the garrison set fire to the buildings and retreated.

The insurrection was an organized and general rising of the people against the French, and against King Norodom for being forced into a treaty sacrificing the independence of the kingdom. The King had remained sullenly in his palace, refusing to stir out until the pressure placed upon him was removed. The insurgents made his voluntary imprisonment an involuntary one, and kept him a captive in his palace. The Governor of Cochin China sent troops immediately into Cambodia, and started himself for the scene of the troubles. Lieut.-Col. Miramond led a column by forced marches against Sivotha, and surprised his camp on Jan. 21. The insurgents were dispersed and their baggage captured.

A small French detachment captured Fort Angko on June 15 at the point of the bayonet, after four unsuccessful attacks, and pursued the rebels in the direction of the Gulf of Siam. The Cambodian insurrection spread into northern Cochin China. French flying columns scoured the district and suppressed some of the bands. A fort near the frontier in Cambodia was destroyed by a column advancing from Chandoc, on July 18. Commander Colbert marched against a body of insurgents in Pursat, headed by the former Governor of the province, but met with so severe a resistance that he was obliged to send for re-enforcements. On July 11 a Chinese band was driven from intrenched positions in the province of Kampot, and routed with heavy loss. For more than a month they had troubled the frontier region between the Mekong and the Gulf of Siam. In the Treang district, north of Chandoc, the rebels dispersed after several reverses near Takeo. The district immediately surrounding the capital was the only one in which tranquillity was preserved. The military expeditions against the rebels in different parts of the kingdom had no sensible effect in reducing the rebellion. The policy of conciliation was tried with apparently better results. An instrument was found in the second King, or Obbareach, who was "devoted to France." This important personage made a tour through the province of Banam at the request of the French Resident. Meeting a band of 600 near Toule Toi, he addressed their chiefs, and the next day they surrendered, saying that they had only taken arms through fear of the former Governor, Preay Vang. Shortly afterward this prominent rebel leader himself came into camp and made his submission with 20 chiefs. Inundations hindered French operations in the early summer, and this encouraged the rebels in the northern provinces of Pursat and Kompong Thom, and in the districts between Hatien and the Mekong, and necessitated the expeditions in July. The Governor of Cochin China traveled with the second King and his Chief of Cabinet through the central provinces. Amnesty was promised to all who had not committed crimes. Several of the governors and insurgent leaders submitted, and bands that had formed dispersed. Straw for rebuilding houses and seed-corn were distributed among them, as well as provisions.

The Governor of Cochin China telegraphed in the beginning of September that, thanks to the active intervention of Norodom, and the second King, the southeastern provinces were tranquillized, but that the province of Pursat was still kept in agitation by Sivotha.

CAMEROONS. The German Government declared a protectorate in 1884 over the various chiefs on the Cameroons river, over the adjacent district of Bimbia, the island of Nikol, and subsequently over the district of Malimba, Plantation, and Criby. In 1885 the protectorate was extended over the Cameroons Mountain district and over some of the Dualla communities on the upper waters of the Cameroons and Mungo rivers. The protectorate of the Cameroons and adjacent districts stretches along the coast of Biafra Bay, on the west coast of Africa, from the eastern boundary of the British Oil river territory to the northern limit of the French colony of Gaboon.

Complications with England.—On April 19, 1884, the English Government was officially apprised of the expedition of Dr. Nachtigal, Consul-General and Imperial Commissioner to the West Coast of Africa, to inquire into the conditions of German commerce and to "conduct negotiations connected with certain questions." Consul Hewett, aided by the English traders and missionaries on the coast, engaged in busy efforts to forestall the colonizing designs of Germany. The trade of the Cameroons district was shared by German and English merchants, the former having more recently the larger portion of the trade. For five years the leading chiefs had repeatedly asked for English annexation, but had received no answer to their communications. Mr. Hewett now obtained a petition from a number of the chiefs, and, on August 23, 1884, Lord Granville notified the German Government that the district was under British protection. More than a month before, Dr. Nachtigal had secured the cession of the district by treaty with all the chiefs, and had hoisted the German flag. When interrogated as to their change of attitude, the chiefs replied that they had waited for some time for the English answer before accepting the German offers. The accomplished fact was accepted by the English Government, and cordial assurances were sent from the English Foreign Office. At the same time the British Government hastened to declare a protectorate over the whole coast north of the new German colony and over the Niger district up to the confluence of the Benue, without the formality observed by Germany of obtaining the consent of all the native rulers and people. A "race" was begun by English agents for the possession of the Cameroons Mountain district, as is described below. The annexation of the missionary settlement of Victoria, at the head of Ambas Bay, had been decided upon the year before. This portion of the Cameroons Mountain district was formally annexed and declared a British colony on July 19, 1884, before the German protectorate over the neighboring coast was known. On Dec. 1 Prince Bismarck said to Sir E. Malet that if the British were gradually surrounding the Cameroons with further annexations, he would regard it as a very unfriendly act. On Jan. 20, after an additional footing had been obtained on the coast in the way mentioned further on, Lord Granville announced that the British Government had found it expedient to place under its sovereignty or protection the territories extending from Ambas Bay to Lagos. Bismarck construed this as "intended, in spite of assurances to the contrary, to prevent the extension of our possessions."

On the 24th of November, 1884, the Hamburg Syndicate of merchants trading in West Africa complained to the German Government of the "peace-imperiling" conduct of the English Vice-Consul in the Cameroons, Mr. Buchan, and of an English trading-firm. Count Münster requested Lord Granville to put a stop to Buchan's anti-German machinations. Earl Granville promised to inquire into the matter, and asked that in the future such differences should be adjusted between the German squadron commander and the English authorities. Later Lord Granville said that the merchants complained of were highly respectable, and that Mr. Buchan would soon be replaced by a regular official, who would investigate the matter further. The Hamburg Syndicate declared on Dec. 30 that the natives were disorderly because power was divided between the Germans and the English, and that the English Consul, Mr. Hewett, and the consular agent, Mr. Buchan, endeavored to thwart and hamper German authority and aimed at bringing all the region surrounding Cameroons under British sovereignty. The attention of the English Government was thereupon called to the circumstance that complaints of efforts of British officials to prevent the extension inland of German possessions and to injure German prestige were based upon facts. The natives had taken prisoner the captain of an English vessel and killed two of his crew. To avenge this outrage the German squadron was ordered to Cameroons.

A Pole, named Rogozinski, with two of his compatriots, had established some stations before the coming of the Germans in the Cameroons Mountains. Hearing that Dr. Nachtigal intended to extend the German protectorate over this region, he did all that he could to turn the chiefs against the Germans. Fearing energetic action on the part of Dr. Nachtigal, he entered into communications with Englishmen with the view of getting the English Government to forestall the Germans, and promised to use his influence with the chiefs if an English gun-boat arrived for the purpose. He and his associate Janikowski acquired proprietary rights over a portion of the Cameroons Mountains, and worked upon the tribes to conclude a treaty with England. At this stage the British gun-boat Forward entered Cameroons Bay, and her commander intimated the readiness of Consul Hewett to agree to the proposals of Rogozinski. The latter placed his property under English protection. The gunboat steamed to the mountainous part of the coast with Rogozinski on board. There a treaty was signed with the chiefs by which the whole coast region between Victoria and Calabar was exempted from German sovereignty. This was scarcely concluded when the German cruisers Leipzig and Möve steamed up to the coast with Dr. Nachtigal on board, just as the English war-vessel was leaving.

Prince Bismarck related these facts to the Reichstag in asking, June 10, for a vote for a steamer to be used by the Governor of the Cameroons, the vote carrying with it the sanction for the creation of such an office. The Chancellor declared that he was *in utramque paratus*, whether to apply his hand firmly in that part of Africa or to withdraw it altogether. In reply to Dr. Windthorst, who expressed misgivings as to the safety of colonial expansion while Germany was surrounded by enemies, Prince Bismarck declared that Germany had around her only friendly governments with whom she stood in the closest trustful relations. The league of the three empires was in itself a vaulted arch, which could bear much stress from other quarters; with Italy and Spain intimate friendship subsisted; and with France Germany was on a better footing than at any time since before 1866. With England, Germany was on good terms, though certain sections of the English people, accustomed to the belief that Britannia rules the waves, feel an unwelcome surprise at seeing England's "landlubberly cousin" go to sea. If the English Government should adopt the opinions of certain classes of English subjects regarding the German colonial policy, then, he said, "we should scarcely be able to support the English policy in other questions which deeply interest England without incurring the disapproval of the German people. We should, perhaps, be forced to support, without wishing it, those who are adversaries to England, and to establish some *do, ut des*." Deprecating the thought of the good relations with England being disturbed, he vaunted the military power of Germany in the following words: "We are surrounded by governments which have the same interest as we in maintaining peace. There is no Government which could bear a war better than the German Government can, and if another believed itself able to break the peace of Europe without injury to other of its interests, Germany would still say, 'We can do that still more easily; only we are more conscientious and more considerate.'" Denying the necessity of building a navy that could be matched with that of any other power in order to maintain colonial establishments, the Chancellor asked: "Is it really impossible for us to attain the naval strength of Portugal, of Holland, of Spain, of the United States, of Russia even? Would Germany really be unable to keep a navy which can hold the sea against all other powers except England and France—nay, against them too—such is the spirit that I know is in our seamen?" Brought to his feet again by a reference of the clerical leader to the jealousy with which England in particular viewed the colonial expansion of Germany, Prince Bismarck declared it impossible that a breach of the peace should occur between Germany and England: "Our differences of opinion with England will never, within the limits of human foresight, go so far as not to be capable of settlement by honest good-will and skillful, provident diplomacy, such as is not wanting on our part."

The conduct of the English on the coast gave rise to fresh complaints on the part of the German Chancellor. Consul Hewett treated the Germans as interlopers, who were to be ousted from the Cameroons, and summoned a Court of Equity on German territory. Captain Campbell, of the British war-ship Rapid, treated the German flag with such discourtesy that Admiral Knorr, commanding the German squadron, reported that, but for remarkable forbearance on his part, a collision would have occurred between the vessels of the two powers.

The Disturbances in the Cameroons.—The trouble on the Cameroons river which the German Government found it necessary to arrest with fire and sword was a revolt against the German protectorate and against the paramount chief, King Bell, who had made the treaty by certain of his under-chiefs who stood under English influence and were instigated by intriguing English traders. The Englishmen spread all kinds of damaging reports against the "German rogues." They incited the people against King Bell by declaring that he had deceived them in various particulars, and that he had, instead of distributing among them half of the sum received from the Germans according to agreement, kept the greater part for himself. If the German naval squadron had not been on the coast, the Germans would have been exterminated in their pioneer colony, established with such a flourish of trumpets. King Bell was helpless against his rebellious tribesmen. The German factories were threatened, and the merchants paid a heavy ransom to induce the negroes to put off the pillage for another day. Although the English circulated everywhere with entire freedom, every German canoe was stopped. The leaders of the revolt were the chiefs of Joss Town and Hickory Town, who, with their people, were entirely won over by the English. The English Consul, Hewett, was cognizant of the movement. Lock Prisso, the Hickory Town chief, was Bell's most powerful vassal. Jim Equalla, the first chief of Dido Town, stood in the same relation to King Aqua, and aimed at independence. He was partially recognized as independent in the German treaties, and took sides with the Germans during the disturbances; but Aqua took an equivocal position. The uprising started with a league between the Joss and Hickory people, which was directed originally against King Bell only, and not against the Germans.

On the 20th, 21st, and 22d of December, 1884, the marines of the Bismarck and Olga suppressed by force of arms the bands of rebellious negroes. Several chiefs and many natives were killed and others captured. The Germans lost one killed and eight wounded. Before the arrival of the war-vessels the inhabitants of Hickory Town and Joss Town had driven away King Bell, threatened the merchants, and burned Bell Town. On the 20th, 330 men landed with four guns. Hickory Town was taken with slight resistance and without loss. It was learned that Pantänius, Woermann's agent, had been carried off by Joss Town people. An officer of the Olga hastened with a party to the rescue. The men, sixty in number, landed under fire from Bell Town, stormed a height, and held the top against four hundred negroes firing from the bush until support arrived from the Bismarck, when Joss Town was stormed and burned, but Pantänius had been murdered. On the 22d Hickory Town was bombarded.

The British Consul and Vice-Consul appeared at King Aqua's town and made reclamations for the property of English merchants and missionaries destroyed by the bombardment. A Court of Equity was called and damages awarded. The German Government afterward contested these claims, saying that the English houses were fired upon because they harbored the assailants of the Germans, who fired from the shelter of the buildings. All the kinglets and chiefs of the Cameroons river attended a peace palaver on board the Olga on Dec. 29. The Joss people, who burned Bell's Town and menaced the German factories, fled to the Quaqua river, and the Hickory people to the upper course of the Cameroons. An amnesty was granted to the Hickory people, and Lock Prisso reconciled himself with King Bell and the Germans.

The people on the lower course of the Cameroons and Mungo rivers belong to the Dualla tribe. The most powerful chiefs of the group on the coast, numbering about 24,000 souls, who monopolize the trade with the interior, are King Bell and King Aqua. They purchase palm-oil and ivory from a second tribe of native traders, settled on the Abo and Wuri affluents of the Cameroons river, and on the Upper Mungo, who do not permit them to deal directly with the tribes beyond, while they themselves are debarred from trading with the factories on the coast. King Bell overcame the second line of traders on the Mungo river, and purchased directly from the third group beyond. The prices of produce are enhanced sevenfold by the two classes of intermediary traders. Admiral Knorr ascended the Cameroons and the Abo in a steam pinnace in the latter part of January. The people of Abo rightly suspected that the object sought in extending the German protectorate over them was to break down gradually the barriers to direct trade and destroy their commercial privileges. Bell's son, who accompanied the Admiral, committed the indiscretion of buying some oil. For this the natives barred the river, but, upon the imperative demand of the Admiral, let the steamboat pass. According to a non-official account, they seized the person of the Admiral, and did not release him until his men resorted to severe reprisals. To punish them for their audacity, the Admiral declared an embargo on all trade with Abo. The Abo people in return prevented the Germans from entering the interior by the Mungo, where they had a settlement at Mbunjo. The refugees from Joss and Hickory towns were settled here in large numbers, and they kept up the blockade zealously. Others on the Quaqua creek cut off the ordinary means of communication with Malimba, Batanga, and the rest of the southern Cameroons district. There were about 800 rebels who kept up a chronic disturbance throughout the district while their families remained on the Cameroons river. Admiral Knorr proclaimed martial law and arrested Lock Prisso, who was held as a hostage. The embargo on the Abo trade was non-effective. A small steamer with twenty men was anchored in the Abo, or Yabiang, where it enters the Cameroons. The traffic was not stopped, the crew was incapacitated by fever, and on the 21st of March the blockade was discontinued. Dr. Nachtigal and Admiral Knorr succeeded in making treaties with some of the kinglets and villages on the Mungo and Wuri rivers.

Cameroons Mountain.—The coast of the Cameroons Mountain district was not included in the German protectorate established in 1884, which extended only to the Bimbia district, the eastern spur of the mountain, abutting on the Bimbia river. West of Bimbia on the coast English Baptist missionaries were settled at Victoria, extending to the fine harbor called Man-of-War Bay. West of them the Pole, Rogozinski, had acquired proprietary rights in the negro village of Bota, and placed it under English protection. He was instrumental also in enabling the commander of the Forward, Arthur Furlonger, to extend the protection of the British flag over the Rumby river and the whole coast northwestward as far as Calabar. Rogozinski purchased two villages back of Bota, and the Baptists began to extend their authority over a row of villages extending far into the interior and cutting off the connection between Bimbia and the attractive mountain region.

In January, 1885, a struggle for the mountain districts took place between Hugo Zöller, a German journalist, agent for the Woermanns, assisted by two Swedish elephant-hunters established in the mountains, and Rogozinski, aided by the black Christians of Victoria. The English party did not venture to carry out the threats of the Victoria Court of Equity, to stop the goods sent to the German agent for the purpose of securing treaties with the local chiefs. In the first two villages beyond those controlled by the Victoria Baptists the Swedes were supreme. The first was secured for Germany by a treaty with the chief; but before they reached the second village Rogozinski had arrived, and, without leave or authority from any one, hoisted the Union Jack. The people would have torn down the flag and assaulted the Pole, yet they refused to sign a protest, having been told by the Victorians that they would die if they touched a German pen. The next village was taken under German protection in due form. The preliminary proceedings for the establishment of a German protectorate were the signing by the chiefs, with the consent of the people, of a petition for the protection of the German flag, and usually the cession to the German agent of the "unoccupied ground." The villages were politically separate and independent of each other. A bargain was struck with the chiefs of a large district far up in the mountains, but at the last moment messengers from Victoria brought a tale of German witchcraft which caused the negroes to break up the meeting and flee in terror. The German and his Swedish companions were at this point deserted by their native porters and forced to return to Bimbia. Mabinga, farther eastward, at the foot of the mountain, had meanwhile been taken under German protection. Making another excursion from this point, while the Consul-General, Dr. Nachtigal, with the gunboat Möve, was in the harbor, the same agent raised the German flag in Bongandjo, the most important place on the southern slope of the mountain, and made treaties with a number of chiefs beyond; but when he came to Sopo he found that Rogozinski had raised the English flag, and the authorities of Victoria had announced by proclamation the occupation of this district. Dr. Nachtigal made the tour of the places in which territorial rights had been acquired, and concluded the arrangements by officially proclaiming a German protectorate. The Bismarck sailed to the Cameroons Mountain coast to raise the German flag over several other places. Before Feb. 1 Bokonange, Bonatanga, Boando, Attome, and Basse were also included in the German protectorate. Rogozinski, who had hoisted the English flag at Mapanja, the first village in the mountains that had accepted German protection, now pulled up one of the boundary-marks set by the German officers and sent it with an insolent note to the Consulate. The English Vice-Consul, who had arrived at Victoria, agreed to the restoration of the boundary-pole and the lowering of the

English flag at Mapanja, but refused to deliver up Rogozinski, who had been appointed a Civil Commissioner. With the agreement of the English official the English flag gave place to the German at Bwassa and various other places where it had been raised by the Polish Teutophobe after the Germans had acquired territorial rights. A large portion of the Cameroons Mountain, a chain of localities encircling the English protectorate of Victoria, with the contiguous possessions of Rogozinski, from Bokonange to the ocean, was acquired for Germany.

The Mahin District.—The Germans were tempted, by the chicanery of Englishmen on the coast and the "race for the Cameroons Mountains," to obtain by similar tactics a footing within the bounds of the long stretch of coast that had been declared English territory by proclamation. Between the Benin mouth of the Niger and Lagos were the petty kings of Mahin and Itebu, who objected to the customs duties and other burdens of English administration, but were persuaded by a German agent to accept a German protectorate. The Möve steamed up to the coast on the 22d of January, and Dr. Nachtigal concluded treaties with the King of Mahin and his brother and vassal, the Chief of Itebu.

Compromise with England.—A controversy over colonial subjects, chiefly the Cameroons question, was kept up for several months between the two Cabinets in the manner inaugurated in the Angra Paqueña dispute. The diplomatic difficulties were aggravated by recriminations uttered by the ministers in explanations to the respective Parliaments and conveyed in Blue and White Book reports. In a speech of Prince Bismarck in the Reichstag on March 2 he complained that confidential conversations were made public, and dispatches published before they were received. He objected to the English method of diplomatic intercourse by writing, saying that he had received from the English Government since the summer of 1884 as many as one hundred and twenty-eight notes, covering seven hundred or eight hundred pages, which was more than he had received during the twenty-three years of his ministry from all the other governments together. Lord Granville said that, in respect to Egypt, Prince Bismarck had advised England "to take it." The Chancellor declared that, when repeatedly asked to advise or hint a course in Egypt that would not be opposed by Germany, he had refrained on account of the responsibility he felt toward other cabinets, but had said to Lord Ampthill that if he were an English minister he would secure the English position in Egypt by agreement with the Sultan and acting as his "leaseholder," thus avoiding the setting aside of treaties and all cause of offense to other powers. He closed his explanation by saying that he would endeavor "to restore our relations to that footing of calm and friendly intercourse which has always subsisted between us and England, and which is natural to both countries, neither having vital interests that conflict with those of the other."

In his note of February 21 Earl Granville, whose proposal of a local commission to mark out boundaries had been agreed to by Prince Bismarck, said that it was only intended to apply to the boundaries between Bimbia and Ambas Bay Settlement, and could not be extended to the west, where there can be no question as to the frontiers. As at the time when the German relations with England were strained on account of Angra Paqueña, Count Herbert Bismarck was dispatched to London to convey his father's views to the English ministers and seek a settlement of the disputed points. As before, Prince Bismarck gained what he desired. The special envoy took back to Berlin a settlement that abandoned to Germany the coast of Ambas Bay and the entire Cameroons Mountain district, including the domain acquired by Rogozinski at Bota and provisionally taken under English protection, but not including the English colony of Victoria. In return, Germany agreed to relinquish the protectorate over the Mahin district and not to take advantage of any failure of the English authorities to secure treaties with the natives, but to leave to England the entire coast from the new German boundary northward to Lagos. Germany was to be free to assert sovereign rights without interference over the coast region, extending from the French boundary of Gaboon to the Rio del Rey, with the exception of Victoria, while Great Britain was to establish without dispute her dominion over the coast-line reaching from Rio del Rey to Cape Three Points, beyond Cape Coast Castle.

CANADA, DOMINION OF. Cabinet Changes.—At the beginning of 1885 the Cabinet was composed as follows: President of the Privy Council, Superintendent-General of Indian Affairs, and Prime Minister, Rt. Hon. Sir John Macdonald, G. C. B.; Minister of Finance, Hon. Sir Leonard Tilley, K. C. M. G.; Minister of Justice, Hon. Sir Alexander Campbell, K. C. M. G.; Minister of Public Works, Hon. Sir Hector Langevin, K. C. M. G.; Minister of Railways and Canals, vacant; Minister of Agriculture, Hon. John Henry Pope; Minister of Customs, Hon. Mackenzie Bowell; Minister of the Interior, Hon. Sir D. L. Macpherson, K. C. M. G.; Minister of Militia, Hon. A. P. Caron (now Sir Adolph Caron, K. C. M. G.); Minister of Marine and Fisheries, Hon. A. W. McLelan; Postmaster-General, Hon. John Carling; Minister of Inland Revenue, Hon. John Costigan; without portfolio, Hon. Frank Smith; Secretary of State, Hon. J. A. Chapleau. In September several changes were made in the Cabinet. The portfolio of Minister of Justice was transferred from Sir Alexander Campbell to Judge Thompson, who resigned his seat on the bench to accept the appointment. A constituency was opened for Judge Thompson by appointing Mr. McIsaac, member for Antigonish, N. S., an opponent of the Government, to the bench. The portfolio of Minister of Railways and Canals, vacant for over a year, was intrusted to the Hon. John Henry Pope. Mr. Pope was succeeded as Minister of Agriculture by the Hon. Mr. Carling, who in turn was succeeded as Postmaster-General by Sir A. Campbell. Sir David Macpherson, who resigned his portfolio of Minister of the Interior, presumably on account of the outcry raised against his administration of the department in connection with the Northwest rebellion, was succeeded by the Hon. Thomas White, M. P. for Cardwell, one of the oldest newspaper men in Canada. The Minister of Militia was knighted for his services in connection with the rebellion. In October Sir Leonard Tilley resigned the portfolio of Minister of Finance, on account of ill health, and was appointed Lieutenant-Governor of New Brunswick.

Finances.—On June 30, 1884, the public debt of Canada was $242,482,416.21, against $93,046,057.73 in 1867. By May 31, 1885, the debt had mounted to $258,711,088. The rapid increase in the public debt was the occasion of many ominous prophecies in the Dominion, but the credit of the country was never better. The Minister of Finance, Sir Leonard Tilley, paid a visit to England in June, to raise the money to pay off a loan made in 1860, which the Government had the option of maturing in 1885. Sir Leonard placed a 4 per cent. loan, at an average price of £100 17*s.* 8*d.*—the most successful loan ever floated by Canada. The rate of interest on the Canadian public debt has steadily decreased from 5·21 per cent. in 1867, to 3·98 per cent. in 1885. The Canadian Pacific loans and the Northwest rebellion assisted greatly to swell the debt this year. A grant of $5,000,000 was made to meet the expenses of the latter. The customs changes in 1885 were unimportant, but the customs and excise duties on spirits and tobacco were increased for revenue purposes in consequence of the rebellion. The fiscal year ending June 30, 1885, closed with a deficit of two and a half million dollars, and with a prospect that about a third of the revenue of the Dominion would now be required to pay the interest on the public debt.

Rebellion.—The rebellion of the French half-breeds, or Metis, of the Northwest Territories will make the year 1885 memorable in the history of Canada. The insurrection broke out with startling suddenness. There had been vague rumors of discontent and grievances among the half-breeds of the Saskatchewan, but that they would attempt to obtain redress by an appeal to arms was hardly believed until the first shots were fired. The Hon. Edward Blake, leader of the Liberal party, charged the Government with "grave instances of neglect, delay, and mismanagement, prior to the outbreak, in matters deeply affecting the peace, welfare, and good government of the country," and endeavored to show that for some years past the half-breeds had been pressing their grievances upon the attention of the Government. The half-breeds had certainly made demands in 1878 (during the Mackenzie *régime*) and subsequently, which the Government only appointed a commission to investigate in the spring of 1885. In 1878 the half-breeds of the Northwest Territories asked for a distribution of scrip and lands among themselves similar to that already made among the half-breeds of Manitoba. The Council of the Northwest Territory, on Aug. 2, 1878, passed resolutions commending these claims to the Dominion Government. The Council advised the Government "that it would be injudicious to set apart reserves of land for the half-breeds of the Northwest Territory or to give them negotiable scrip; that in view, however, of the fact that grants of land or issues of scrip were made to the half-breeds of Manitoba, toward the extinguishment of the Indian title to the lands of that province, there will undoubtedly be general dissatisfaction among the half-breeds of the said Territories unless they receive some like consideration; that this consideration would tend most to the advantage of the half-breeds were it given in the form of a non-transferable location ticket for say 160 acres for each half-breed head of a family and each half-breed child of parents resident in the said Territories at the time of the transfer thereof to Canada," etc.

While there is abundant evidence that some of the grievances of the half-breeds had been frequently brought before the notice of the Government, it can not be pretended that they had exhausted all constitutional means of obtaining redress before appealing to arms. The people of the older provinces of Canada hardly knew that the half-breeds had any grievances until the eve of the rebellion. In the summer of 1884 the half-breeds sent a deputation to Louis Riel, the leader of the Red River rebellion of 1869, who was living in Montana, to invite him to lead them in a constitutional agitation for their rights. On July 8, 1884, Riel arrived at Duck Lake with his family, and immediately began a systematic agitation among the half-breeds and Indians. At a meeting held at St. Laurent on Sept. 5, Riel stated the claims of his followers to be: "The subdivision of the Northwest Territories into provinces; for the settlers of the Northwest the same advantages as those granted in 1870 to the settlers of Manitoba; a grant of 240 acres of land to the half-breeds who have not yet received that grant from the Government; an immediate gratuitous grant by letters patent, to the proprietors who occupy them, of the lands of which they are in possession; the offer for sale by the Government, of half a million acres of land, the products of this sale to be placed at interest and applied to the aid of half-breeds, in the establishment of hospitals, orphanages, schools, etc., or in supplying the poorer persons with plows or other agricultural implements, and in distributing seeds in the spring; the reservation of about 100 townships, chosen in the swampy lands, which are not likely to be settled before a long time; these lands to be distributed to the half-breed children of the coming generation and during 120 years; each child to receive his share when he reaches the age of eighteen years; a subvention of at least $1,000 to sustain an establishment of nuns in each place where a great number of half-breed families are established; an amelioration in the conditions of labor asked from the Indians and a greater care of their persons, so as to prevent them dying with hunger." The half-breeds complained greatly of the Roman Catholic bishops and clergy holding aloof from the movement. These, while sympathizing with some of the aims of the half-breeds, would not countenance their methods. Riel's movements were closely watched by the Northwest Mounted Police. On Dec. 22, in conversation with Mr. Macdowell, member of the Northwest Council, Riel declared himself tired of Canada, and offered to return to Montana and remain there and to guarantee to give up all connection with the Canadian half-breeds after inducing them to drop all their claims against the Government, if the Government would give him some pecuniary assistance and settle something on his wife and family. Mr. Macdowell thought $5,000 would be accepted. However, it was not offered. At the beginning of March the mounted police reported a rising imminent, and during that month Riel for the second time established a "Provisional Government" in the Northwest. On the 18th the rebels made prisoners of the Indian agent at Duck Lake and a number of teamsters, and on the 25th they seized the Government stores at Duck Lake. The following day a collision occurred between the rebels and a party of sixty mounted police and forty volunteers under the command of Major L. N. F. Crozier, Superintendent of the Northwest Mounted Police. The rebels were seen in a *coulée* about two miles from Duck Lake. Major Crozier called upon the half-breeds to surrender. Gabriel Dumont, the leader and the commander-in-chief of the rebels throughout the subsequent campaign, asked, "Is it to be a fight?" For answer Major Crozier gave the order to fire. After an engagement of half an hour, it became evident that the rebels, who were well sheltered in the *coulée*, were masters of the situation, and Crozier's force retreated, having lost fourteen killed and nine wounded. The rebel loss was six killed and three wounded. Crozier retired to Fort Carleton, where he met Colonel Irvine with a hundred mounted police. Fort Carleton was immediately evacuated, and either by accident or design, to prevent the stores falling into the hands of the rebels, was burned. The police retired to Prince Albert.

Encouraged by the success of the half-breeds, the Indians now became actively aggressive. Battleford was besieged by Poundmaker's tribe, and the settlers forced to take refuge in the barracks. On March 29 a band of Indians murdered their farm instructor (Payne), and on April 3, Good Friday, some of Big Bear's Indians committed a horrible massacre at Frog Lake, killing two Roman Catholic missionaries, Father Marchand and Father Fafard, Indian agent Finn, and half a dozen others. They also made several prisoners, including Mrs. Gowanlock and Mrs. Delaney, whose husbands were among the slain, and about whose fate there was the greatest anxiety during their long captivity.

On March 24, the day after Sir John Macdonald announced in the House of Commons that the Government had been informed of the outbreak, Maj.-Gen. Middleton, the officer commanding the Canadian militia, started for Winnipeg, ostensibly on the ordinary business of his department. On the 25th a hundred men of the Ninetieth Battalion (Winnipeg) left for Qu'Appelle to keep in order the Indians of that district; and two days later Gen. Middleton, with a demi-battery of the Winnipeg Field Battery, followed. On the 28th "A" and "B" Batteries of the Regiment of Canadian Artillery were ordered to muster a hundred men each to proceed to the front, and the troops left the same morning. The Canadian Pacific Railway not being completed, the troops had to march across the gaps in the line, north of Lake Superior, a distance of about eighty miles, and suffered greatly through the heavy snow and severe cold. On the 28th also, the Queen's Own, the Tenth Royal Grenadiers, "C" Company of the Infantry School Corps, all of Toronto, and the Sixty-fifth Mount Royal Rifles of Montreal (a French-Canadian battalion), were ordered out. Subsequently Lieut.-Col. Williams, M. P., of the Forty-sixth Battalion, was authorized to raise a battalion consisting of a company each from the Fortieth, Fifteenth, Forty-fifth, Forty-sixth, Forty-seventh, Forty-ninth, and Fifty-ninth Battalions, to be known as the Midland Battalion. Lieut.-Col. O'Brien, M. P., was authorized to raise a provisional battalion by taking four companies each from the Thirty-fifth and Twelfth Battalions. Lieut.-Col. Scott and Lieut.-Col. Osborne Smith were each authorized to raise battalions in Manitoba with headquarters at Winnipeg, and known respectively as the Ninety-first and Ninety-second Battalions. A detachment of fifty sharp-shooters from the Governor-General's Foot-Guards, Ottawa, was placed under the command of Capt. Todd. The Seventh Fusiliers of London, the Ninth Rifles of Quebec, and a provisional battalion from Halifax, consisting of detachments from the Sixty-sixth and Sixty-third Battalions and Halifax Garrison Artillery, under command of Lieut.-Col. Bremner, were also ordered out. There was considerable delay in getting all the troops to the front, owing to the time lost in crossing the gaps in the railway.

About April 1 Gen. Middleton went from

Winnipeg to Qu'Appelle, where, on his arrival, he had only the Ninetieth Battalion, three hundred and thirty strong, and the Winnipeg Field Battery (two guns and sixty men). It was now apparent that the fighting, if any, was to be far up the country, and the general set to work to organize a transport service, as hitherto there had been no transport service in connection with the Canadian militia. Capt. John French raised a troop of scouts.

On April 9 Gen. Middleton with his small force moved on the trail to the half-breed settlement at St. Laurent. On reaching Touchwood Hills, where the first opposition had been expected, Middleton held a satisfactory "pow-wow" with the Cree chiefs. Here he was joined by "A" Battery and half of "C" Company. With these troops Middleton crossed the Great Salt Plain. In the early part of the march the troops suffered greatly through the severe cold, and the trail was almost impassable through the melting snow. The first halt of any length was made at Clarke's Crossing, on the South Saskatchewan, about one hundred miles from Qu'Appelle. By this time the insufficiency of the transport service began to be realized; a halt of nearly a fortnight being necessitated to allow of provisions overtaking the troops. While at Clarke's Crossing the force was strengthened by the arrival of the Royal Grenadiers and an irregular mounted infantry corps of eighty men raised by Major Boulton in the Birtle district, who were known as "Boulton's Horse," and proved themselves invaluable throughout the campaign.

The forces in the Northwest were divided into three columns—one, under the immediate command of Gen. Middleton, making Qu'Appelle its railway base; one, under Col. Otter, leaving the railway at Swift Current; and the third, under Gen. Strange, at Calgary—all being under the direction, as far as circumstances would permit, of Gen. Middleton.

On leaving Clarke's Crossing, Middleton divided his forces into two columns, one on either side of the river, in the hope of preventing the escape of any of the rebels toward the frontier. He in person commanded the right wing, and Lieut.-Col. Montizambert, of "B" Battery, R. C. A., with Lord Melgund as chief of staff, commanded the left division. Every precaution was taken; but, up to the day before Clarke's Crossing was left, there seemed to be little probability of meeting any opposition. On this day Lord Melgund and a party of scouts were fired upon by some half-breeds and Indians. The two divisions marched down the river toward Batoche, the principal settlement of the disaffected half-breeds, in sight of each other, and camped on the night of April 23 eighteen miles below Clarke's Crossing. By six o'clock next morning the forces were again on the march, one troop of Boulton's horse being extended across the front of the column, half a mile in advance. About five or six miles had been covered, and Boulton's men were pushing through a series of wooded bluffs toward a deep *coulée* (a wide ravine with a small stream running through it) intersecting the trail, when a body of horsemen dashed over the edge of the *coulée*, and, after firing at the advancing irregulars, retired to the *coulée* and kept up a heavy fusillade. The extended line of Boulton's men dismounted, and, taking cover-returned the rebel fire. The enemy were making a second dash from the *coulée* on horseback, when the reserve troop of the mounted infantry rode up at the gallop to re-enforce their comrades of the advanced line, and the half-breeds again took cover in the *coulée*. Gen. Middleton, who was riding with his aides-de-camp a little in rear of the advanced line, and well in range of the first volleys, gave orders for the infantry advanced guard, consisting of a company of the Ninetieth, to hasten to the front. He also ordered "C" Company, "A" Battery, and the remainder of the Ninetieth, with the exception of one company held as a rear-guard, to get into action immediately. There was considerable confusion among the volunteers at first, and it was not until "A" Battery and "C" Company, which had been some distance in rear of the column, had passed the Ninetieth, extended, and got into action, that the Ninetieth were fairly got under fire. One of the guns of "A" Battery opened fire with shrapnel shell, with fuses timed to the edge of the *coulée*, and after three rounds the rebels withdrew from the edge, and Boulton's horse advanced. The fight, which was known as the battle of Fish Creek, lasted all day. The half-breeds, shielded by ingenious rifle-pits, honey-combed in the edge of the *coulée*, seldom showed themselves. A number of houses in the vicinity which sheltered rebels were shelled. The main body of the rebels found the heavy fire of the artillery too hot for them, and retreated from the *coulée* early in the day. A few of the half-breeds, who could not get out of the pits without running the gantlet of all the troops, held the position. A gallant little charge made by a detachment of "A" Battery showed that a determined attack would have driven them out. Gen. Middleton, however, being unwilling to waste the lives of the volunteers, withdrew his forces out of range of the rifle-pits and camped on the bank of the river, within two hundred yards of the scene of the battle. The losses of the troops on this day were eleven killed and forty-eight wounded. Great uncertainty prevails as to the losses of the half-breeds on this occasion.

The forces remained camped at Fish Creek until May 7, waiting for supplies and chiefly for ammunition; on this date camp was struck, and the troops proceeded as far as Gabriel Dumont's Crossing. Col. Montizambert's division had been ferried across the river, so that the whole force was now united on the right bank. Middleton had also been re-enforced by two companies of the Midland Battalion, under command of Lieut.-Col. Williams, which had come from Swift Current down the North Saskatchewan by the steamer Northcote. This steamer also brought the much-desired ammunition, a Gatling machine-gun, and Lieut.-Col. Van Straubenzie, D. A. G. of the Fifth Military District, who came to the front, at the special request of the general, to assume the rank of brigadier commanding the Infantry Brigade. When at Fish Creek, Middleton received information that the rebels were intrenching themselves at Batoche. With a view to turning the flank of their position, he made a *détour* from Gabriel's Crossing by the prairie, striking Batoche at right angles to the river-trail, by which the half-breeds would naturally expect the forces to proceed. At the same time that the troops advanced by land, the Northcote, which had been barricaded and manned by "C" Company of the Infantry School, dropped down the river.

The troops, in fighting trim, were advancing on Batoche on May 9, when the Northcote was heard whistling in the direction of the village, and loud volleys of musketry announced that the half-breeds were making a stand. After driving back a few straggling rebel marksmen, the forces advanced to the high land on the edge of the river, overlooking the settlement. Large camps were seen on both sides of the river. The guns of "A" Battery opened fire, and while the cannonade was in progress the rebels suddenly showed themselves at close quarters, and began a fight very similar on their part to that at Fish Creek. They were established in deep rifle-pits, from which they kept up a heavy fire on the troops, while they ran but little risk themselves. All the troops were engaged, and remained extended and exchanging shots with the enemy until late in the evening, when the force withdrew a short distance from the rebel lines and formed a rough redoubt. The rebels followed the retiring skirmishers right up to the fortified encampment, and made a short but fierce onslaught. This was on Saturday, and until Tuesday the forces remained in the same position, the general contenting himself with extending skirmishers around the camp each morning, and keeping them there all day, exchanging shots with the rebels, and with making occasional reconnaissances on the flanks of the enemy's position. On Tuesday the usual line of skirmishers was not extended until after dinner, when the Grenadiers and Midlanders were led forward by Col. Van Straubenzie, who had permission from Gen. Middleton to advance his men as far as he could, instead of occupying the lines to which the skirmishers had been extended on the previous day. The rifle-pits immediately in front of the encampment appeared to be deserted at the time, and the troops advanced much farther than usual before drawing the rebel fire. To utilize the river as a cover for the left flank of the attack, two companies of the Midland Battalion, who were on the left, had to wheel round an obstruction in the shape of a high bank and rush down the steep bank to the edge of the river, before the Grenadiers could advance to the front without running the risk of being outflanked. The Midlanders successfully accomplished this movement, cheering the while, and maintaining a heavy fire as they advanced. The Midlanders having wheeled round the point and got into line with the Grenadiers, the latter were also advanced, and reached a point much in advance of any that had previously been gained by the troops. The Ninetieth Battalion was deployed and prolonged the line to the right, while Boulton's horse extended the line still farther in that direction, outflanking a formidable line of rifle-pits commanding the river-trail. The troops advanced by a series of rushes, driving the half-breeds from the pits before them. Some of the rebels made a determined stand, and several were clubbed to death in their pits with the butt-ends of rifles. That night the attacking force bivouacked in intrenchments hastily constructed in the village, and the only remaining object of the half-breeds seems to have been to save themselves by flight. All of the white prisoners taken by the rebels during the insurrection were found in the cellars of the houses at Batoche and released. After a day's delay at Batoche the march to Prince Albert was continued. The third day after the conclusive engagement Riel surrendered himself to some scouts, and was brought a prisoner into camp at Guardapuy's Crossing, where the forces were being ferried across to the north shore.

Meanwhile, the Northcote had run the gauntlet of a heavy rebel fire from both sides of the river, and, returning, arrived at Batoche a few minutes after the cessation of the firing. Two or three of her crew were slightly wounded, and the steamer sustained some damage by coming into collision with the ferry cable, which had been lowered with that object by the rebels. On May 19 the column reached Prince Albert, which had been cut off from communication with the outside world for two months. Prince Albert was garrisoned by a force of seventy-five mounted police, under command of Lieut.-Col. Irvine, Chief Commissioner of the Northwest Mounted Police, and a hundred settlers, formed into a volunteer corps. The loyal settlers from the adjoining country, for fifty miles round, were gathered at Prince Albert.

On May 25 the advanced guard of the forces set out by steamer for Battleford, and the remainder followed in the course of the next week. Battleford, about which there had been considerable anxiety at the beginning of the outbreak, had been relieved by the column that had marched across the prairie from Swift Current under the command of Lieut.-Col. Otter, commandant of "C" Company, Toronto Infantry School. The column consisted of forty-five men of the Northwest Mounted Police, under command of Lieut.-Col. Herchmer; "B" Battery, Royal Canadian Artillery, with two nine-pounders and a Gatling; the Guards sharp-shooters, and the Queen's Own Rifles. Owing to the repeated urgent appeals for assistance from Lieut.-Col. Morris, the officer commanding the mounted police detachment at Battleford, Gen. Middleton ordered Col. Otter to conduct the advance with as much rapidity as possible. To carry these instructions out, wagons were procured for the transport of the whole column, and the march of 166 miles was accomplished in five days. On arriving at Battleford, Col. Otter found that the Indians of Poundmaker's and Sweetgrass's reserves were ravaging the neighboring country, and were in the habit of carrying their raids to within musket-shot of the barricade in the center of the village, which is situated on a high promontory at the junction of the Battle and North Saskatchewan rivers. A building on the opposite side of the Battle river from the village was roughly fortified to keep the marauders in check. On May 1 Col. Otter, in the hope of bringing Poundmaker and his subordinate chiefs into subjection, left Battleford for the great chief's reserve at Cut-Knife Hill, with a flying column, consisting of drafts from all the corps of his column. Early on the following day, while the flying column was toiling up the steep slope on the west side of Cut-Knife Creek, it was suddenly attacked in front and on both flanks, simultaneously, by the Indians, who had perfect cover in a series of little ravines running in the shape of a horseshoe around the position occupied by the forces. Hurried dispositions for defense were immediately made. The wagons were formed into a *zareba*, and the troops extended in an irregular square. The Indians fought with great spirit, and made several attempts to take the guns of "B" Battery, but were repelled, partly by the effective fire of a Gatling, and partly by countercharges led by Maj. Short, of "B" Battery. Short, at the head of a number of men, including some from every corps engaged, drove the Indians out of the ravines, one after the other, and had advanced close to the Indian *tepées*, which were a considerable distance in rear of the position first occupied by the Indians, when he was ordered by Col. Otter to retire. The whole column withdrew, and while retiring down the hill was desperately assailed by the Indians, whose fire at the time the order was given to withdraw had been almost silenced. The force withdrew to Battleford, and was followed for some distance by the Indians. The troops lost on this occasion eight killed and thirteen wounded. After this engagement Col. Otter remained in Battleford, and the Indians carried on their old depredations, but to a less extent. They were in this condition when Gen. Middleton arrived, although news of the rebel defeat at Batoche appeared to have reached Poundmaker, as an envoy of his had reached Battleford to inquire whether Gen. Middleton had yet arrived, and had said that Poundmaker was anxious to see Middleton.

The day after Middleton arrived at Battleford the information of his arrival was communicated to Poundmaker, and on May 26 the chief and his whole tribe came into camp, and he, with his leading men, was placed under arrest. The whole of the Indians, as the half-breeds at Batoche had been, were disarmed as far as practicable.

The only direction from which trouble was now apprehended was in the neighborhood of Fort Pitt, where Big Bear's nomadic band of Crees was supposed to be. Maj.-Gen. T. B. Strange was understood to have reached this point about this time with his column, which left Calgary late in April. This column consisted of a troop of mounted police under Maj. Steele; a nine-pounder gun, manned by mounted police; the Alberta Mounted Rifles, a corps raised in the Calgary district by Maj. Hatton and Capt. Oswald, and composed largely of cowboys; the Ninety-second Winnipeg Light Infantry, and the Sixty-fifth Mount Royal Rifles (the French Canadians). It being understood that Gen. Strange was short of supplies, a steamer was dispatched to Fort Pitt with a quantity of provisions. When near Fort Pitt a canoe was met with two scouts from Gen. Strange, conveying the information that an engagement had been fought with Big Bear's band, and that Strange had been short of ammunition. Gen. Strange had had great difficulties in organizing his transport, the distance to be covered being much greater than that of either of the other columns. The first objective point of the column was Edmonton, a post 194 miles to the north of Calgary, which was threatened by the Wood Crees resident in the neighborhood. Edmonton was relieved on May 2. At this place scows were constructed for the advance of the column to Fort Pitt by river. A garrison was left at Edmonton, and on May 18 the main body of the column left for Fort Pitt. On the way down, a supply post was established at Victoria, seventy-four miles from Edmonton, and an advance party was pushed forward to Frog Lake, about ninety miles farther on, where the massacre already related had taken place. Arriving at Frog Lake, the mutilated remains of the murdered whites were found in the charred ruins of the church and other buildings. On May 24 the Sixty-fifth Battalion had reached Fort Pitt in the scows, and the day following the Ninety-second Battalion and the mounted men joined them, and the whole force, known as the Alberta Field Force, was once more united.

Fort Pitt, which had been evacuated by Inspector Dickens, of the Northwest Mounted Police, under somewhat remarkable circumstances, was found to have been completely ransacked, and only one or two buildings were found standing. Fort Pitt was a Hudson Bay Company's post, in charge of an agent named William McLean. As it was a trading-post of considerable importance, a strong detachment of mounted police was always kept there as a garrison. McLean allowed himself to get into the power of Big Bear's band, and, to save his life, consented to write a letter to Inspector Dickens, urging him to evacuate the fort and to send all of McLean's family and the other whites in the fort, with the exception of the police, to join him with Big Bear's band. Although the fort was strongly fortified and well provisioned, Inspector Dickens yielded, and with his police effected his escape by the river to Battleford. When the Alberta Field Force arrived at Fort Pitt they found that Big Bear was taking to the wooded country to the north, and was carrying the whites as prisoners along with him. Gen. Strange followed him with all expedition, and on May 27 came up with the encampment. A little skirmishing took place, but the lateness of the hour prevented the engagement being pressed. The following day the Indians were found to have retired a short distance to a very strong position on the summit of a high bank on the farther side of a *muskeg* or mossy bog. The troops were unable to advance through this, and, after a fight lasting all day, during which four men were wounded, the force was compelled to withdraw. This was the engagement, news of which the scouts, met by the steamer, were conveying to Battleford. The steamer immediately returned to Battleford, and the next night and the following day the whole of Gen. Middleton's old column, with the exception of two nine-pounders and "A" Battery, which were deemed useless for such work as now seemed to be required, had arrived at a point on the Saskatchewan about twenty miles in Strange's rear. The Indians after the engagement appeared to have taken to the woods and to have beaten a hasty retreat. Strange remained encamped at the scene of his engagement at Little Red Deer Creek until Middleton's arrival, after which he proceeded with his column to the Roman Catholic Mission at Onion Lake, where, it was understood, Big Bear intended going. Gen. Middleton with all his mounted men followed up the Indians' trail, and after overcoming almost insurmountable difficulties (owing to the nature of the country, there being no trails), reached an encampment at Loon Lake, a sheet of water eighty miles north of Fort Pitt. Here it was found that the Indians had crossed a *muskeg*, deemed impassable to the heavy transport-wagons, and the force in consequence returned to Fort Pitt, where the infantry brigade was encamped. While waiting for Gen. Middleton at Little Red Deer Creek, Gen. Strange dispatched Maj. Steele and a party of sixty mounted men to follow the Indians' trail, and he had come up with the Indians while they were fording Loon Lake at the opposite end to that at which Middleton's force was subsequently stopped by the *muskeg* referred to. Three of Major Steele's men were wounded, but the loss on the side of the Indians was estimated to have been very heavy. Steele on retiring met Middleton's force, and the two commands joined. Two days after arriving at Fort Pitt, Gen. Middleton started out with his mounted men for Onion Lake and the Beaver river, where Gen. Strange's force was encamped. When at the Beaver river, Gen. Middleton learned from some Chippewayan Indians, who had been unwillingly forced to join the Crees in the insurrection, that the white prisoners had been released by Big Bear and were on the way to his camp. The general returned to Fort Pitt, and a few days later the white prisoners arrived, having been released at the instance of a party of the Wood Crees, who had sympathized with them throughout. When Middleton saw that Big Bear had decided on attempting to elude him, he ordered Col. Otter to march his column from Battleford to Stony Lake, about sixty miles north of Battleford, to attempt to intercept Big Bear's band on the march. Col. Irvine at the same time, with his mounted police, was dispatched to Green Lake, to the north of Prince Albert, with similar orders. These precautions completely demoralized the Indians, and the band dispersed. About the end of June Big Bear, accompanied only by one of his tribesmen, was captured near Fort Carleton by two mounted policemen, in attempting to make his escape toward the American frontier. This ended the campaign, and Gen. Middleton massed the whole of the forces at Battleford, where they assembled on June 30, and left by steamer for Selkirk, whence the volunteer regiments proceeded to their homes.

The losses of the forces during the campaign were 53 killed and 129 wounded. This does not include the murdered and wounded settlers. The losses on the rebel side are not known, but were undoubtedly much heavier.

Gabriel Dumont, whose courage had won for him the respect of the loyalists, escaped to the United States. Riel and the other prisoners were conveyed to Regina, the capital of the Northwest Territories. The prisoners were tried before Col. Richardson, a stipendiary magistrate, and a jury of six. Riel and ten of the Indians were sentenced to death, and the sentence was carried out upon Riel and upon eight of the Indians implicated in the Frog Lake massacre. The other two capital sentences were commuted. Twenty-seven prisoners were sentenced to imprisonment for terms varying from two years to seventeen years.

For their services in suppressing the rebellion, Maj.-Gen. Middleton and the Hon. A. P. Caron, Minister of Militia, were knighted. The volunteers were rewarded with a grant of land-scrip of 320 acres apiece, or, if preferred, $80 cash.

Electoral Franchise.—The parliamentary session of 1885 was the longest ever held by the Dominion Parliament, and lasted within ten days of six months. The debate on the Franchise Bill occupied the House of Commons two months, determined but unsuccessful efforts being made by the Opposition to talk the measure out. The Liberals made no effort to conceal their obstructive tactics, pleading that obstruction was justified by the partisan character of the bill. The British North America Act (the act of the Imperial Parliament by which some of the British North American Provinces were united as the Dominion of Canada in 1867) provided the electoral franchises in the several provinces should be the franchises for the Canadian Parliament in those provinces respectively, until the Parliament of Canada should otherwise provide. An exception was made for the District of Algoma, in which every male subject, being twenty-one years of age and a householder, was to have a vote. The Dominion Parliament had neglected for so many years to assert its right to determine the qualification of its own electorate, that the advocates of provincial rights had come to look upon the privilege as one that ought never to have been granted, and ought not to be exercised. The Premier, Sir John Macdonald, who introduced the bill, had, however, repeatedly, in "speeches from the throne," promised such a measure. The voters' qualification in the several provinces differing so widely, the effect of the bill was not the same all over the Dominion. Thus, in Prince Edward Island and British Columbia, where manhood suffrage had prevailed, the bill was only saved from being a disfranchising bill by the expedient of giving the right to vote to any person who had ever voted. Under Sir John's bill, to be qualified to vote in a city or town, a man must be twenty-one years old, and a British subject by birth or naturalization. He must also be either the owner of real property worth $300; the tenant of real property worth $2 a month, $6 a quarter, $12 a half-year, or $20 a year, and have been in possession of such a property for twelve months (not necessarily the same property for the whole year); the *bona fide* occupant of real property worth $300, in enjoyment of the revenues thereof for himself or his wife; a resident within a city or town, deriving an annual income of not less than $400 from some trade, calling, office, or profession, or from some investment, or charge on real property in Canada; the son of any such owner of real property, and resident continuously with his father (or mother, after the death of his father) on such property, providing the value of the property would be sufficient, if divided between the father and his sons, to qualify them all; if not, as many of the sons are enfranchised in order of seniority as the value of the property, if equally divided among the elder of them, would qualify; an absence from home of four months in the year does not disqualify a son. In counties a man must be twenty-one years of age and a British subject. He must also be either the owner of real property worth $150; the tenant of real property worth a rental of $2 a month, $6 a quarter, $12 a half-year, $20 a year (the rent may be payable in money or in kind, except when the property is situated in an incorporated village), change of tenancy during the year not disqualifying; the *bona fide* occupant of real property worth $150, and enjoying the profits thereof for himself or his wife; a resident in a county, enjoying an income of $400 a year; a farmer's son, resident on the farm of his father (or mother, after the death of his father), or son of any owner of real property other than a farm, if the farm or property is of sufficient value, if divided equally between the father and all his sons, to qualify them; if the farm is not of sufficient value to qualify all the sons, then as many of the elder sons are enfranchised in order of seniority as the value of the farm, if equally divided, would be sufficient to qualify; a fisherman, and the owner of real property, and boats and tackle, together of the actual value of $150. Joint tenants or joint owners in property, whose share would be sufficient to qualify them if held in their own names, are qualified. Judges and certain election officers and election agents are not allowed to vote. The bill was also framed to enfranchise unmarried women and widows, but the Premier declined to imperil the whole bill for the sake of this feature of it, and Parliament declined to grant female suffrage. The Government was attacked by the Liberals for introducing such an important measure late in the session, but the most serious opposition was made to the great powers conferred by the bill upon the revising officers, who were to be Government nominees; and to the interpretation clause making an Indian a "person" within the meaning of the act. The bill contemplated the appointment of a revising officer for each electoral district, whose duties would be to prepare, revise, and complete the electoral lists. No appeal was to be permitted from the revising officer's decisions on points of fact; but an appeal might be made on a point of law, with the consent of the revising officer. A revising officer in any province, except Quebec, was to be either a judge or a junior judge of any county court in the province in which he was to act, or a barrister of five years' standing at the bar of that province. In Quebec he must be either a judge of the Superior Court for Lower Canada, or an advocate of that province of at least five years' standing. To the Liberals, the revising officer was a most objectionable institution. It was taken for granted that the revising officers, being Government nominees, would all be Government partisans. Only a degree less objectionable to the Opposition was the proposal to enfranchise the Indians. It was argued that the Indians are wards of the Government, and likely to be influenced by the Indian Department. In discussing this bill the House of

Commons sat on one occasion for fifty-seven consecutive hours. The most important amendments obtained by the Opposition gave the right of appeal from the decision of the revising officer, when that officer is not a county court judge, to the county court judge; limited the Indian franchise to the Indians living on the reserves of the old settled provinces, and with the same property qualification as white men; prohibited revising barristers from becoming candidates for Parliament; and excluded the Chinese from the electorate.

Legislation. — In addition to the Franchise Bill, to which reference is made above, many other important measures occupied the attention of the Dominion Parliament this year. The Royal Commission appointed in 1884 to inquire into the subject of Chinese immigration, including its trade relations and the social and moral objections taken to it, made a report to Parliament (particulars concerning which will be found in the article on British Columbia). A bill based upon this report was introduced by the Hon. J. A. Chapleau, one of the members of the Royal Commission, and became law. The act imposes a duty of fifty dollars upon every person of Chinese origin entering Canada, except, first, the members of the diplomatic corps or other Government representatives, their suite and servants, consuls, and consular agents; and, secondly, tourists, merchants, men of science, and students who bear certificates of identity issued by the Government whose subjects they are, and indorsed by a British consul, *chargé d'affaires*, or other accredited representative of her Majesty. No vessel carrying Chinese immigrants to carry more than one for every fifty tons of its tonnage; the owner to be liable to a fine of fifty dollars for every one carried in excess of this number. Return certificates are to be issued to Chinamen residing in Canada and wishing to leave the country temporarily. The Chinese are forbidden to take part in the organization of courts or tribunals, and the penalty incurred by any Chinese person for evading any of the provisions of the act is twelve months' imprisonment, or a fine of five hundred dollars, or both.

The want of an insolvent law having been pressed upon the attention of the Government by deputations of English merchants that waited upon the Premier while he was in England, by representations made by the Dominion Boards of Trade, and by petitions to the House of Commons, the question was brought before the House by the introduction of three bills for the distribution of insolvent estates, one introduced by Mr. J. J. Curran, embodying the views of the Montreal Board of Trade. The measures were referred to a select committee, with instructions to draw up a bill taking Mr. Curran's measure for its foundation. The committee amended the bill by allowing the debtor a discharge. The bill was very liberal in its treatment of debtors, and provoked considerable hostility among the representatives of the agricultural districts. Under the bill, a debtor whose estate would pay 66⅔ per cent. could get a discharge upon obtaining the consent of a simple majority of his creditors in number and amount of claims. A debtor whose assets would only pay between 33⅓ per cent. and 66⅔ per cent. would require the consent of a majority of his creditors, two thirds in number and three fourths in amount. A debtor whose estate would pay less than 33⅓ per cent. would require the consent of a majority, three fourths in number and four fifths in amount. To qualify a creditor to vote for the discharge of an insolvent, his claim must be not less than one hundred dollars. At the end of the session the bill was dropped.

A similar fate overtook a factory bill, and Mr. Charlton's celebrated bill to make seduction a criminal offense, passed in previous years by the House of Commons, but negatived by the Senate, was also "slaughtered." A bill to prevent Sunday excursions was rejected on the ground that such legislation appertained to the provincial legislatures, and a similar bill was subsequently passed in Ontario.

A deadlock was brought about between the two houses of Parliament in consequence of an attempt on the part of the temperance advocates to amend the Scott Act (the Canadian local-option law) so as to provide better machinery for the punishment of offenders against that statute. The Senate took the opportunity to amend the act further by introducing a clause permitting the sale of beer and light wines in Scott Act counties, and permitting physicians to sell intoxicating liquors for medicinal purposes. The Senate's amendments provoked much indignation in the temperance ranks, and the upper house was accused of not keeping faith with the counties that had already adopted the Scott Act. The House of Commons refused to concur in the Senate amendments, and as the Senate persisted in upholding them, the bill to amend the Scott Act fell to the ground, and the act consequently remains in precisely its original form. The Senate's course was denounced at indignation meetings.

One of the results of the Northwest rebellion was the passing of a measure prohibiting persons in the Northwest from having in their possession any improved fire-arms requiring fixed ammunition. It was explained that the law would only be enforced in certain districts on being proclaimed. When a district is proclaimed, any loyal citizen wishing to retain his rifle must obtain a permit from the Lieutenant-Governor. The rebellion also led to the passing of an act to increase the mounted police from three hundred to a thousand men.

The Liquor Licenses Act of 1883, taking away from the provincial legislatures the right of licensing the sale of liquors, having been pronounced unconstitutional by the Supreme Court of Canada, a bill suspending its operation, pending an appeal to the Privy Council in England, was introduced by a member of the Opposition, supported by the Government, and passed.

The assessment system of life insurance was hotly discussed in consequence of a bill introduced by Sir Leonard Tilley, permitting the assessment companies to carry on business on becoming registered, without making the deposit of $50,000 with the Dominion Government required by the Consolidated Insurance Act of 1877. The assessment companies were victorious.

An act introducing the "Torrens land system" was brought into the Senate, but dropped at the close of the session. In consequence of the Quebec explosion, and of threats made against the Parliament Buildings and other public buildings, a rigorous measure relating to explosive substances was passed without discussion. For the same reasons the Parliament Buildings were closely guarded throughout the session, all the entrances but the main one being closed. The first Deputy Speaker in the history of the Canadian Parliament was appointed, Mr. M. B. Daly, M. P. for Halifax, being elected to the office. In consequence of the great length of the session, the sessional indemnity of the members was increased from $1,000 to $1,500.

The Fisheries.—The fishery clauses of the Washington Treaty expired on June 30, 1885, the United States Government having availed itself of the right to determine those clauses on giving two years' notice. This was done in the belief that the privilege enjoyed by American vessels of fishing in Canadian waters was not worth the amount awarded by the Halifax Commission as compensation. The expiration of the fishery clauses of the Washington Treaty revives the conditions of the Convention of London of 1818, with regard to the interpretation of which there are serious differences of opinion between the United States and Great Britain. For instance, an important question arises as to whether the three-mile limit of the Canadian fisheries is to follow the deviations of the shore, or to be measured from headland to headland. It is admitted that the Canadian fisheries are much more valuable than the American fisheries, and that the privilege of fishing in American waters is nothing like an equivalent for the privilege of fishing in Canadian waters. Both Governments were anxious to arrive at some satisfactory understanding before the expiration of the fishery clauses. It was feared that the revival of the conditions of the Convention of London would lead to serious complications. American vessels would be seized for fishing in Canadian waters, and ill-feeling would be created between the two countries. A long correspondence between the Governments of the United States, Great Britain, and Canada, followed the giving of the notice in 1883 to determine the fishery clauses. The Dominion Government proposed to extend until June 1, 1886, the privilege enjoyed by American fishermen of fishing in Canadian waters, and the privilege enjoyed by Canadian fishermen of importing their fish into the United States free of duty. This was proposed in order to give time to the two countries to discuss their commercial relations. Mr. Bayard pointed out that the Executive of the United States was not constitutionally competent to extend the reciprocal privileges of the Washington Treaty, that only Congress was competent to do this. Finally, the Dominion Government agreed to allow American fishing-vessels to continue to use the territorial waters of the Dominion from July 1 to the end of the fishing season of 1885, upon the understanding that the President of the United States should bring the whole question before Congress in December, and should recommend the appointment of an International Commission to settle the entire fishing rights of the two Governments. In announcing to the House of Commons the arrangement that had been come to, Sir John Macdonald intimated that negotiations were in progress between the two Governments, aiming not only at a settlement of the fishery question, but at an arrangement for the interchange of natural products between the two countries. The Government was severely criticised for making a one-sided arrangement, in which all the concessions were in favor of the United States; and the Canadian fishermen were greatly dissatisfied at finding their fish excluded from the American market while American vessels were fishing in Canadian waters.

By the conditions of the Convention of London, revived on July 1, 1885, American fishermen have the privilege of fishing within certain specified limits in British North American waters—on part of the southern coast of Newfoundland, from Cape Ray to the Rameau Islands; on the western and northern coasts of the island; on the shores of the Magdalen Islands; and on the coast of Labrador. They also have the privilege of drying and curing fish in any of the unsettled bays, harbors, and creeks on these coasts; but on any of these places becoming settled, American fishermen can only continue to make use of them on making terms with the inhabitants. By the convention, the United States renounced forever any liberty previously enjoyed or claimed by American fishermen to take, dry, or cure fish within three marine miles of any coast of her Majesty's dominions not included in the limits above mentioned. They are permitted, under certain restrictions, to enter bays, harbors, or creeks, for the purpose of repairing damages or obtaining stores. The three-mile limit covers eleven hundred miles of coast, and includes an area of about one hundred thousand square miles. Shortly after the Washington Treaty was made, the Canadian Government issued licenses authorizing American fishermen to fish within the three-mile limit, and in the first year about eight hundred American vessels were thus licensed; but the American fishermen soon got out of the habit of taking out licenses.

Temperance.—The Dominion Alliance for the Total Suppression of the Liquor-Traffic fought a very vigorous and successful campaign in 1885. Between January 15 and September 24 the Canada Temperance Act, better known as the Scott Act, was submitted to twenty-five constituencies in Canada, with the result that the act was adopted in twenty of them, in most cases by large majorities. The majorities against the adoption of the act in three of the five constituencies that rejected it were only seven, ten, and twenty-five respectively. The counties and cities that adopted the act were as follow: In Ontario: Kent, Lanark, Lennox and Addington, Guelph, Carleton, Durham and Northumberland, Elgin, Lambton, St. Thomas, Wellington, Frontenac, Lincoln, Middlesex, Ontario, Victoria, Peterborough; in Quebec: Brome, Drummond, Chicoutimi; in Nova Scotia: Guysboro'. The act was rejected in Kingston, Perth, Hastings, and Haldimand, Ont., and in Missisquoi, Que. The provisions of the act have not yet been extended to British Columbia. In Manitoba, out of five counties and one city, two counties have adopted the act. In New Brunswick, out of fourteen counties and two cities, nine counties and one city have adopted the act. In Nova Scotia, out of eighteen counties and one city, thirteen counties have adopted the act. In Ontario, out of thirty-eight counties and unions of counties and ten cities, twenty-three counties and two cities have adopted the act. In Prince Edward Island the act is in force throughout the province. In Quebec, out of fifty-six counties and four cities, five counties have adopted the act. The Scott Act has not yet been abandoned by a single constituency that has tried it, although six repeal votes have been taken.

Railways.—In the autumn of 1885 the Canadian Pacific Railway was completed. The construction of a transcontinental railway by the Dominion was one of the conditions upon which British Columbia entered the confederation in 1871, and this onerous undertaking has ever since been one of the greatest responsibilities of successive Governments. The work, after it was begun by Government, was handed over in 1881 to the present company, which undertook its completion by May 1, 1891, on the following conditions: The company to receive as subsidies 25,000,000 acres of land; all land required for stations and workshops; the sections of the railway built and being built by the Government, valued at $30,000,000; exemption from taxation for twenty years; the privilege of importing materials for the road, duty free; nò rival lines to be authorized for twenty years. The scheme was fiercely opposed by the Liberals, on the ground of the price being too high, but the contract was ratified by Parliament. The construction of the main line has gone on at a marvelous rate, but the company's financial career has been so unfortunate that Parliament has repeatedly had to come to its assistance. In 1883 the Government guaranteed 3 per cent. interest for ten years on the company's stock of $65,000,000, taking a deposit of $14,000,000 as security. In 1884 Parliament authorized a loan of $22,500,000 to the company until 1891, secured by a mortgage on the whole property of the company. Five years' credit was also given the company for $7,300,000, due the Government on the guarantee fund. This year the company once more appealed to Parliament, declaring itself unable to raise the capital to equip the line, because of the Government's mortgage upon its whole property, and asking for a rearrangement of the lien, for power to issue first-mortgage bonds, and for a temporary advance, to be paid from the sale of part of the bonds. Parliament authorized the company to issue $35,000,000 of 5 per cent. first-mortgage bonds; cancelled the Government lien upon the line; took $20,000,000 of the first-mortgage bonds as security for $20,000,000 of the loan; took a mortgage on the company's unsold lands as security for the balance, and authorized a temporary loan of $5,000,000 until July 1, 1886. The bonds realizing a much higher price than was expected (95), the company raised enough money to repay the temporary loan and to complete the line. The Canadian Pacific has spent about $15,000,000 in acquiring, by lease or purchase, the control of branch lines. The main line is 3,025 miles long, running from Quebec to Port Moody, and it has 432 miles of branch lines. It has cost the country, including loans, over $140,000,000. Early in October the Canadian Pacific purchased the North Shore Railway, running from Montreal to Quebec.

Hudson Bay Exploration.—The second exploring expedition to Hudson Bay, organized by the Canadian Government, was successfully carried out in the summer of 1885. H. M. S. Alert, formerly one of Sir George Nares's vessels, and subsequently lent to the United States for the Greely Relief Expedition, was lent to the Canadian Government by the Admiralty for this expedition. The primary object of the Alert was to relieve the stations established in Hudson Strait in 1884, by the Neptune, for the purpose of watching the movements of the ice and of taking other observations to test the practicability of the Hudson Bay route. The possibility of navigating the strait was not in question, the Hudson Bay Company's vessels having demonstrated this for many years. The problem to be solved was, whether the season of navigation is sufficiently long to enable the produce of the Northwest to find an outlet by way of Hudson Bay. The opening of this route would bring the wheat-fields of the Northwest much nearer to the English market, and the development of this great wheat-growing country would be greatly accelerated if it could be shown that the construction of a railway from Manitoba to Fort York, and the establishment of a line of steamers from Fort York to Liverpool, were practicable. Last year the Neptune left observing parties at six stations: one on the north side of the entrance to the strait, one on either side half-way through, one on either side of the western end of the strait, and one on the northern part of the Labrador coast. The Alert found that one of the stations had been deserted the day before her arrival. The officer in charge of the station had left a note saying that his fuel and provisions were running short, that game had been scarce, the Esquimaux in the district were dying of starvation, and he and his two men, to save their own lives, had left in an open boat for Fort Chimo, in Niagara Bay. The party were under the impression that the relief expedition had met with some accident. It was subsequently learned that the three men had been picked up at Fort Chimo by the Hudson Bay Company's steamer Labrador. The other stations were relieved, and from these it was learned that on the north side of the straits the ice moves continuously westward, while on the south side a warmer current with considerable open water moves eastward. The straits apparently are never entirely frozen over. The average length of the season of possible navigation is still a matter of great uncertainty and wide difference of opinion. Dr. Bell, the geologist, naturalist, and medical officer of the expedition, estimates the average at between four and five months. Captain Gordon, of the Alert, thinks the average much shorter. The length of the season of open water varies greatly from year to year, and so too does the time of opening. Without signal-stations and a telegraph system, the season of navigation, always short, would be still further shortened by uncertainty as to the dates of its opening and closing. There was more ice in the strait than usual this year. If there is an average of anything like four or five months' navigation, the railway at Fort York, for which surveys are now being made, will doubtless be built.

CAPE OF GOOD HOPE, a British colony in South Africa. The executive power is vested in a Governor and an Executive Council; the legislative authority in a Legislative Council of 22 members, elected for seven years, and a House of Assembly of 74 members, elected for five years. Suffrage is limited by a property qualification. By a law of 1882 both English and Dutch can be read in the Parliament, instead of English alone as heretofore. The Governor is Sir Hercules G. R. Robinson, previously Governor of New South Wales and afterward of New Zealand, whence he was transferred to the Cape in 1880. The office is combined with that of High Commissioner for South Africa. The Attorney-General and Premier is Mr. Upington. The Agent-General in London is Capt. Mills.

Area and Population.—The area of Cape Colony proper is 199,950 square miles. The population in 1875 was 720,984, comprising 369,628 males and 351,356 females. The population was divided in respect to race as follows: whites, 236,783; Malays, 10,817; Hottentots, 98,561; Fingo, 73,506; Caffres, 214,133; mixed and other, 87,184. The dependency of Griqualand West has an area of 12,065 square miles, and had a population, in 1877, of 45,277. The Frankeian districts, or Caffreland proper, have an area of 12,065 square miles; population in 1882, 260,907. Directly under imperial jurisdiction are Basutoland (see BASUTOLAND), with an area of 10,290 square miles and a population of 128,000 souls; Bechuanaland, including Stellaland (see BECHUANALAND); the protectorate of Pondoland; and the port of Walfish Bay, on the coast of Namaqualand, with *rayon* of ten to sixteen miles.

The majority of the white population of South Africa are descendants of the original Dutch, French, and German settlers—for the most part pastoral farmers. Agriculture is pursued only incidentally. Most of the graziers own their farms, which are often from 3,000 to 15,000 acres in extent.

Wine is largely produced; the yield in the census year was 4,484,665 gallons. The proportion of English to Afrikanders or Cape Dutch in Cape Colony is nine to eleven, in Natal one to one, in the two Dutch republics one to eight, in all South Africa three to five. The Dutch land-owners have not been prosperous, and most of their farms are heavily mortgaged. The mercantile and capitalist class is composed of Englishmen and other Europeans. The lucrative industries of diamond-digging, copper-mining, and ostrich-farming are in the hands of the English.

Commerce.—The values of the principal exports in 1883 were as follow: Wool, £1,603,140; ostrich-feathers, £931,380; grease-wool, £389,605; hides and skins, £436,050; copper-ore, £454,113; Angora goat-hair, £271,804. The total exports amounted to £4,408,898; total imports, £6,470,391. The export of diamonds, which is returned separately, was in 1883 £2,742,470. The total value since 1867 was £28,965,247.

Railroads and Telegraphs.—There are three systems of railroads: the western, starting from Cape Town; the midland, starting from Port Elizabeth; and the eastern, starting from East London. The total length completed in the beginning of 1884 was 1,213 miles; the capital outlay, £10,487,417; the gross earnings in 1883, £915,274; the net earnings, £265,725. The eastern system was completed to its terminus at Aliwal North in August, 1885. The only remaining portion of the lines authorized by Parliament was the extension of the western line to the Diamond Fields. While the Bechuanaland expedition was in the field, the colony obtained a loan of imperial funds for the construction of this last link in its projected railway system. When this is completed the total length of railroads, including branches and one private line, will be 1,642 miles, representing a capital expenditure of £14,788,600. During six months in 1885 the government railroads earned a net profit of 3½ per cent. The British Parliament in the session of 1885 authorized the loan of £400,000 to Cape Colony for the extension of the Cape Town line, already completed as far as Hope Town, to Kimberley, a distance of 74 miles. The Cape Government undertake to complete the line in eight months, and on that understanding get the money at 3 per cent.; but, if they fail to build the road within that time, the rate will be raised to 5 per cent. It is expected that a tramway, to be replaced in time by a railway, will be built along the trade-route through the new protectorate of Bechuanaland (see Bechuanaland). The completion of railroad connections with Cape Town and Port Elizabeth will render secure the position of the distinctly English city of Kimberley. This thriving town, which had 13,590 inhabitants, has labored under the dread of the extinction of the diamond industry. Diamonds are found in four or five of the 50 or more dead mud volcanoes scattered about the district. The discovery of similar deposits elsewhere would render the Kimberley mines, now buried under the fallen earth, unprofitable. The decline in the price of diamonds, concurrently with increased difficulty in working, has already impaired the prosperity of the place. Healthfully situated on the central table-land, 4,000 feet above the sea, it is insured, as the distributing point for the inland trade with the two Boer republics and the interior to the north, a vigorous development independent of the diamond industry.

Forests.—The colonial forests were formerly much neglected. A license system for cutting was introduced in 1875, but the regulations did not provide for cultivating a succeeding growth, or protecting young trees. An earlier law provides against incendiary fires. For several years the office of Superintendent of the Crown Forests has been held by the Count de Vasselot. In 1883 new regulations were framed, which provide for cutting the forests in successive sections as the trees mature, and for replacing them by planting and by clearing away fallen trees, and guarding the young growth from the depredations of the natives. Trees are to be felled only in the season when the sap has ceased to rise, in which condition they make durable timber. The most valuable species are the stinkwood, found in the western, and sneezewood, growing in the eastern districts. The latter is an imperishable timber, having a bitter, pungent taste, like greenheart, and resembling it in being proof against marine borers. These species have to a great extent disappeared under the axe of the wood-cutter, and to restore them it is proposed to establish nurseries. Another valuable species, the evergreen Cape boxwood, was used for fuel until it was discovered, in 1884, to be worth two cents a cubic inch for engraving. The preservation of the Transkei forests, and the reclamation of the arid Karoo region, are among the tasks set before the superintendent and the staff of conservators and other officials with which he is to be provided.

Finances.—The revenue is mainly derived from customs. The estimated revenue for the year ending June 30, 1883, was £3,572,110, the actual revenue £3,306,538; the estimated revenue for 1883–'84 was £3,496,790, the actual receipts £2,896,273. The expenditures have exceeded the receipts every year since 1879. The revenue for 1882–'83, including loans, was £5,443,486, and the expenditures £6,341,717. The estimated ordinary revenue for 1884–'85 was £3,552,160, estimated expenditure £3,590,262. The public debt amounted on Jan. 1, 1884, to £19,671,859. The assessed value of property in the colony in 1882 was £34,106,918.

Internal Politics.—The agricultural population of the central districts, mostly belonging to the African-Dutch race, formed the political association called the Afrikander-Bond, for the purpose of defending and promoting the agricultural interests of the colony that were neglected by the English-speaking Parliament, and sacrificed to the interests of commerce and the cities to such an extent that the food of the people was imported from Australia, America, and Europe. Imported flour, canned fruit and vegetables, salt and tinned meat, and condensed milk, were cheaper than domestic produce. Three years after the organization of the Afrikander party, in March, 1884, the Scanlen ministry gave way to one of their own choice. The first duty of the Upington ministry was to ward off the impending state bankruptcy. The expenses of the Basuto war, and a decline in the receipts, caused by a general agricultural and commercial depression, left a deficit of £260,000, in addition to those remaining over from preceding years. Retrenchment was applied with an unsparing hand. Officers of the army were reduced to subalterns, salaries were cut down 15 or 20 per cent., and work on railroads and harbors was stopped. In order to raise a larger revenue, and at the same time benefit colonial producers, the low customs duties on all classes of goods were raised to high figures.

The troubles in Cape Colony were augmented by famine in some parts of the country, particularly the central and eastern districts. There was a deficient harvest in 1884, and in 1885 came a great drought, worms ate the seed in the ground, and hail destroyed the standing crops. The native population suffered starvation in some districts. In Basutoland cases of cannibalism were reported.

Pondoland.—The country of the Amapondo, lying between Natal and Caffraria, with an area of 16,000 square miles and a population of about 400,000, is by nature the richest land in South Africa. Owing to internal disorders and the fear of German interference, the nominal protectorate claimed by Cape Colony was transferred to the Imperial Government in 1884. The native Caffres confine themselves to cattle-raising, and have not suffered the fine soil of the country to be utilized for agricultural purposes. Cotton grows wild in the extensive wooded districts. The products of both the tropical and the temperate zones can be cultivated. There are two excellent harbors, St. John's Mouth and Port Grosvenor, through which a considerable trade has been carried on by Natal merchants, but it has suffered of late from the lawlessness of the people and the exactions of the paramount chief, Umquikela, who levies a toll of 5*s.* on every wagon and £50 on every cargo. This chief has become brutalized by alcohol and insolent to an insufferable degree toward the white people. His under-chiefs have taken advantage of his slack and vicious rule to assert their independence and to vie with him in rapacity and barbarity. A mining company that worked with profit the copper-ore that is abundant in the mountains was obliged by the violence of the natives to abandon its plant. The Amaxebes, who were taken under the protection of the Cape Government in 1876, have been hard pressed by the Pondos. The magistrate, Capt. O'Connor, and Mr. Stamford were sent by the Cape Government to treat with the Pondo King concerning the abatement of disorders, such as the plundering of merchants. Messengers of Umquikela greeted these envoys with a war-dance, and cast grass and dirt at them, to show that their master despised the white people and challenged them to fight. After that, robberies and outrages grew more frequent. Drink, crime, and disease have greatly increased among the Pondo and Fingo tribes of this region. In 1885 their condition was made worse by famine. There is some German trade with the independent tribes, and agents have approached Umquikela with reference to obtaining the port of St. John's river for a German settlement. On June 6, 1885, that "paramount and independent chief of Pondoland" issued a proclamation in which he denied the right of Great Britain to assume the protectorate that had been proclaimed over the coast by the High Commissioner, and declared his willingness to negotiate with any nation with reference to opening up the ports and developing the commerce of his country.

Zululand.—Under the despotic rule of Cetewayo, Zululand was a well-organized and well-administered state. The existence in South Africa of a native government so powerful was considered a danger to white civilization in that part of the world, and when the Zulus threatened to conquer the Transvaal Boers, the British Government intervened and with a great sacrifice of lives and money crushed this Caffre state. Humanitarian motives for the war on behalf of the Zulus themselves were found in the barbarous code of laws practiced by the capable tyrant. The English carried off the King a captive, and, after setting up thirteen kinglets, retired from the country. The inter-tribal quarrels, tumults, crime, murder, and anarchy that followed constituted an annoyance and danger to Natal. Consequently the Imperial Government determined to restore the system of Cetewayo, which it was thought could be accomplished by simply setting the imprisoned monarch free in Zululand. Cetewayo was welcomed by a part of his former subjects, but others clung to their new chiefs, the most powerful of whom, Usibepu or Zibebu, had a following as strong as Cetewayo's, and was aided by Transvaal Boers, who found in anarchic Zululand an opportunity for acquiring land and loot by taking sides in native quarrels according to their old practice. The English, in restoring Cetawayo, assigned to Usibepu the lands he occupied in the north, and, in order to prevent an influx into Natal of natives ousted from their lands in the course of inter-tribal wars, and provide for the Zulus who preferred English administration, annexed a broad tract called the Zulu reserve along the Natal frontier. The reserve is the most fertile district in Cetewayo's old kingdom. The restored King, in attempting to subdue Usibepu and re-establish his rule over the rest of his old dominions, was himself "eaten up" by Usibepu and died in the early part of 1884, a fugitive in the reserve. The rightful heir to the kingdom, according to Zulu law, was Cetewayo's youthful son Dinizulu. On May 21, 1884, Lucas Meyer, who had collected a party of fifty other Boers, convened a number of Zulu chiefs and crowned Dinizulu King of Zululand. The Zulus with the Boer contingent, numbering about one hundred men, attacked and defeated Usibepu, who fled for his life to the reserve. In accordance with a previous agreement, Dinizulu signed a deed of gift granting the white volunteers for their services a tract of land in the west, bordering on the Transvaal, embracing nearly one third of what was left of Zululand, or 3,000,000 out of the total 10,000,000 acres. Dinizulu afterward denied that he ceded to them so large a tract, saying that, while he spoke one thing with his mouth, the Boers wrote another thing on the paper. As in Bechuanaland, since treaties with Great Britain forbade the direct annexation of the newly settled districts to the South African Republic, the white farmers set up an independent state called the Republic of Western Zululand. The British Government complained that the Transvaal authorities in allowing these proceedings infringed the stipulation in the convention of February, 1884, which provides that they shall do their utmost to prevent encroachments by the burghers on land outside of the boundaries of the South African Republic. The republic agreed to appoint commissioners on its eastern and western frontiers, and the British Government to appoint commissioners in the native territories outside, to prevent trespassing. Neither party gave practical effect to this article of the convention, nor did the British authorities prevent English subjects from joining the Boer volunteers in their enterprises. The community of Western Zululand included a considerable proportion of Natalians. The new republic claimed, in virtue of the treaty that Dinizulu repudiated, a protectorate over Zululand, and betrayed the intention of absorbing other districts of the remnant of Zululand that the Zulus declared was too small to provide food for the people. A line of farms along the edge of the reserve was marked off with beacons, and sites were chosen for towns and seaports, by the Boers.

St. Lucia Bay.—Since the visit of Transvaal delegates to Europe in 1884, Germans have entertained the idea of a commercial and political connection with the South African Republic. German capital was subscribed for a railroad to Delagoa Bay, but the concession from the Transvaal frontier to the port, the Portuguese section, was in English hands. The neglect of the English Government to put an end to the disorders in Zululand and Pondoland suggested the scheme of establishing a German port on the coast. The German Government, provoked by English action at the Cameroons and in the Pacific, was not averse to applying here its colonial doctrine that not proximity nor historical claims, but effective jurisdiction, confers territorial rights. Dinizulu had as adviser a German named Einwald, who held out to him the hope that Germany would extend the protection denied by Great Britain, and save his people and their remaining lands from the rapacity of the Boers. With this expectation, Dinizulu conveyed to Einwald, acting as agent for the Bremen merchant Lüderitz, whose acquisitions in Namaqualand and Damaraland afforded the ground for declaring German sovereignty on the southwest coast of Africa, the port of St. Lucia Bay, with 100,000 acres of land. The German squadron on the east coast was under way to hoist the German flag, when Sir Henry Bulwer sent the English ship Goshawk to forestall the Germans, and in December, 1884, Commander Moore raised the British colors over the port. The German Government protested. The English Government justified its action by a prior right, based upon the cession of the port to Great Britain by King Panda, forty years before. After the interchange of several notes, the German Government concluded to recognize the validity of the English occupation, but not without receiving important concessions in other quarters. The citizens of Western Zululand also raised a protest against the assumption of British sovereignty of any part of the kingdom of Dinizulu, all of which, according to a proclamation of the acting state President, Lucas Meyer, is subject to the authority of the republic. In the summer of 1885 a representative of the republic of Western Zululand visited England to confer with the authorities with reference to the recognition of the new state, and, more particularly, of the land-titles. A considerable number of the settlers were British subjects, who were predisposed in favor of the annexation of the district to Natal. In July the Natal Legislative Council passed resolutions in favor of the extension of the imperial jurisdiction over the whole of Zululand and Amatongaland up to the Portuguese frontier, with the view of uniting the territory to Natal "as soon as existing difficulties shall have been adjusted." The discovery of gold in northeastern Transvaal may be the cause of British expansion in these quarters. The population in the new gold-fields is increasing, and gold is sent down the country in larger amounts each month. If the promise of the mines holds out, the influx of American and English miners will probably result in the separation of the district from the South African Republic, and its eventual annexation by Great Britain.

The Zulus were reduced to severe extremities by their internal strife and demoralization, the loss of their best lands, and a short crop in 1884, which compelled them to buy imported food, when in 1885 they suffered a harder famine, and entered Natal in considerable numbers in quest of work and food.

The Southwest Coast of Africa.—After preventing Germany from obtaining a footing in dangerous proximity to the two Dutch republics on the southeastern coast, and thrusting the protectorate of Bechuanaland between the Transvaal and the German possessions on the Atlantic coast, the English Government was less anxious about the development of German colonial interests on the southwest coast, and even contemplated the cession to Germany of the new English colony of Walfish Bay. The Cape Colonists were not of the same mind, for in August the Cape House of Assembly passed a bill to admit free of duty all goods landed at Walfish Bay, the object being to prevent the trade of the region from passing entirely into the hands of the Germans, whose colonies surround that port.

Notwithstanding the diplomatic triumph of Prince Bismarck in the Angra-Paqueña controversy, the claims of Herr Lüderitz to the more valuable part of his purchase—the mining-lands in the Herero country—rested on so insecure a title that the English might have restricted German colonization to the barren and waterless sands of the beach. Such a result was actually accomplished by the Cape Government, with whose commissioner, Mr. Palgrave, Maharero, the rightful lord of the territory behind Sandwich Harbor and Walfish Bay, concluded a treaty, acknowledging a British protectorate, in November, 1884, after refusing two months before to treat with a German agent who came on the same errand.

He was formerly friendly to the Germans, but was angry with them for supplying his rebellious vassals with arms. The Imperial Government in London disavowed the act of the colonial authorities, and left the whole region, except the port and district of Walfish Bay, open to German colonial operations. Forty years back the Herero Caffres were subjugated by the Nama chief, Jonker Afrikander. Twenty years later they rose against their masters. In 1870 peace was concluded through the efforts of the missionary, Dr. Jahn, on terms that made all the Hottentot tribes vassals of the Herero chief. The English, in treating for Walfish Bay, negotiated with Maharero as well as with the local Topnaar tribe. In 1876 the British Government, by agreement with the Herero, declared a protectorate over Damaraland, but, when the Hottentots began a new conflict with the Herero, in the autumn of 1880, withdrew the protectorate. The mountain tribes have not yet been reduced to submission, but continue the war by means of depredations on the Herero cattle-herds. In April, 1884, Maharero reconquered southwestern Hereroland, where the mines are situated, to work which a large German company has been formed, and the sandy coast district of the Topnaars, driving the inhabitants to take refuge with the Europeans in Sandwich Harbor and Walfish Bay. The same territory, including the mining-lands in Maharero's hereditary domain, were purchased of the Topnaar chiefs by Herr Lüderitz for £20.

CAROLINE ISLANDS, an archipelago in the Pacific Ocean. Including the Marshall and Gilbert groups, there are from 500 to 800 islands and islets. Geographers sometimes apply the name thus to all the islands lying along the equator between the Philippines and the Kingsmill group, dividing them into the Western Carolines, or Pelew Islands, the Central Carolines, and the Eastern Carolines or Mulgrave Archipelago, comprising the Marshall and Gilbert groups. Sometimes the latter islands are treated as geographically distinct from the Carolines, and the Pelews are considered as a component part of the archipelago or as an isolated group.

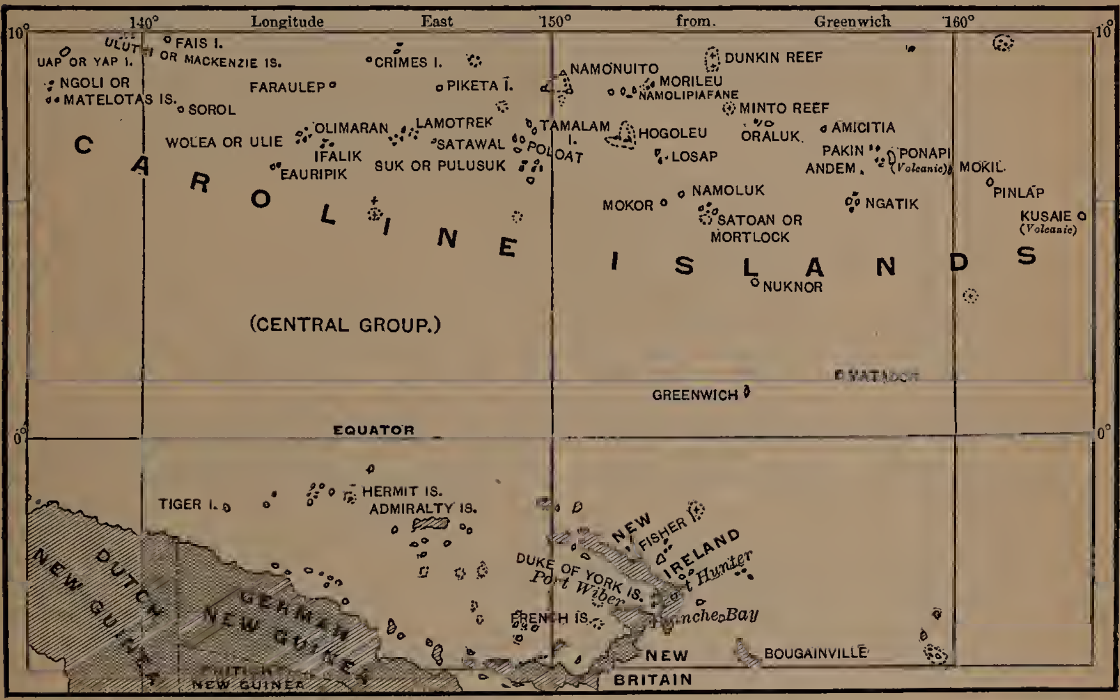
The Pelew or Pelau Islands, sometimes called the Western Carolines, have an area of about 346 square miles. They are almost entirely encircled by a coral reef. Their population is from 8,000 to 10,000. The Central Carolines consist of about 48 groups, containing several hundred islands. The Eastern Carolines, or Mulgrave Archipelago, comprise the Marshall or Radick and the Gilbert groups. Their population is supposed to exceed 100,000.

A few of the islands are of volcanic origin. Their basaltic masses, rising boldly out of the water, are clothed with woods and covered with rich soil, yielding bread-fruit, cocoanuts, sugar-cane, oranges, and bananas. Of this character are Kusaie, Ponape, Ruk, Pelew, and Yap. The great majority of the islands, however, are formed of coral reefs, inclosing lagoons, which usually have channels connecting with the sea. These have a thin soil and a limited rainfall. Their vegetation is scanty, and the only useful plants are the cocoanut-palm, which thrives in all the islands of the archipelago, and the pandanus or screw-pine, which yields a juicy fruit. There is no indigenous fauna, but pigs and chickens are raised by the natives.

The Caroline Islands proper are usually considered to comprise the Central Carolines and the Pelew group. They extend from 131° 4′ to 163° 6′ east longitude, and from 20° 6′ to 1° 3′ north latitude. They have a total area of about 1,200 square miles. They have the Ladrones on the north and New Britain on the south, and extend nearly to the Philippines on the west and the Marshall Islands on the east. Their population is estimated variously, as low as 20,000 and as high as 70,000. The inhabitants are of the brown Polynesian race, with straight hair, which is supposed by some ethnologists to be related to the Caucasian family. They are intellectually superior to the woolly-haired race south of the equator, but they are savages in habits and nature, except where they have been elevated by the efforts of American missionaries. There are evidences on some of the islands of an extinct civilization. Their own religion is a worship of spirits. In several of the islands rites are performed by priests. The islanders go nearly naked, and tattoo their bodies. They are given to licentiousness and intemperance, and have been greatly demoralized through intercourse with European traders. Feuds are frequent and bloody. Like the Maoris and Hawaiians, with whom they are identical in race, they have not only deteriorated morally and physically, but have declined in numbers through contact with whites. They are still ruled by hereditary chiefs.

The islands were discovered by Saavedra, who sailed through the Central Carolines in 1528, and by Drake, who sighted the Pelews in 1579. In 1686 the Spanish Admiral Francesco Lazeano rediscovered the islands and gave them their name after Charles II of Spain. Missionary teaching was begun by the Spaniards in the eighteenth century, but was soon abandoned. The islands were visited by whalers and occasional traders, but the trade until recently was insignificant. Strong's Island, the midmost island of the Central Carolines, was discovered by the American Captain Crozier. American missionaries established themselves on the larger islands in 1851. Through their efforts civilization and education have spread from group to group until the whole archipelago has been brought under their influence. They have reduced to writing five of the dialects, and printed in them various school-books and parts of the Bible. There are over fifty Christian churches, with 4,000 communicants. A remarkable change in the character and manners of the people has been produced through the disinterested labors of the missionaries. The Spaniards in the Philippine and Ladrone Islands have had some intercourse and trade with the Pelews, Yap, and the other islands in the western part of the archipelago. In Yap a Spanish mission was established in 1856.

Until the development of the trade in *copra*, or dried cocoanut, there was little to attract traders in the Caroline Islands. The oil of the cocoanut is extensively used in soap-making. It produces the only soap that can be used with salt water. The oil is extracted in Europe and the residuum is used to feed cattle. There is also some trade in *bêche-de-mer*, or *trepang*. Europeans settled on Ponape, Yap, and some of the other islands, do considerable business with whalers. The principal European goods bartered with the islanders are hardware, tobacco, spirits, and glass bottles. Pearl-shells are also exported, and from the Pelew Islands considerable quantities of tortoise-shell are obtained.



Yap, the westernmost of the Central Caroline Islands, is the name of a group of small volcanic islands encircled by coral reefs. They lie close together, and are usually spoken of as though forming a single island. Unlike other islands of the western Pacific, Yap is densely populated, containing several tribes numbering together 12,000 individuals. The inhabitants retain traces of an earlier civilization. They construct stone piers, and their canoes are well designed and graceful, with carved ornaments at either end. There is an excellent harbor, called Tomil Bay, in the southeast. The people are comparatively light in color, the men tall and well formed, elaborately tattooed, with their long hair tied in a knot; the women lighter of hue, with braided hair and a skirt of bark-strips. What is called money is aragonite-stone in disks, weighing often two or three tons. The stones are brought from a quarry in the Pelew Islands. These stones are placed as a sign of wealth around the mounds on which the large houses, with mats for walls and roofs, are built. The trepang-fisheries of Yap are exhausted. The copra-trade, amounting to 550 tons, is in the hands of the English firm of O'Keefe & Co., which has more than half of the whole trade; Capt. Holcombe, an American, associated with the Germans; and the German houses of Hernsheim & Co., and the South Sea Trading and Plantation Company. The natives will drink no spirits, but are eager purchasers of fire-arms and ammunition, as well as of pipes and tobacco, axes, saws, and other tools, fish-hooks, etc. They are very industrious, and simple in their wants, but the numerous chiefs are continually at war with one another, and exert themselves to obtain the best weapons. Their residences bristle with cannons, among them large Armstrong guns.

The white residents on the islands of northern Micronesia are of two classes, missionaries and traders. The missionaries are sent out by the American Board of Foreign Missions. The principal islands of the Caroline group, besides Yap, are Kusaie or Strong's Island, Ponape or Ascension Island, with their dependent islets, and Ruk or Hogolen, a collection of low and high islands within an encircling reef. Traders do not reside permanently on the latter group, nor upon Ulea, Faralep, Nuguor, and other small islets of the archipelago. The collective export of all of them is perhaps 200 tons of copra and a few tons of the inferior black-edged pearl-shell. Kusaie and Ponape are high islands, consisting of masses of lofty hills. They are exceedingly productive, and abound in fruits, such as bananas, pineapples, mangoes, and limes. Yams are grown in great quantities. The land is covered with rich vegetation. On Kusaie, the smaller island, the population does not exceed 400, all Christians. Several American missionaries reside among them. The exportation, amounting to 48 tons of copra, is in the hands of a German firm. Ponape is the headquarters of the American missionaries. There are 11 of them on the island, and about as many traders, agents of an English, a German, and an American house. The exports are about 40 tons of copra, 3 tons of black-edged pearl, and a large quantity of the nuts of the ivory-palm. On Ponape are the ruins of a city built up out of the water on stone foundations. In Kusaie are ruins of artificial harbors, small canals, a paved street, and a large rectangular stone edifice.

In the atolls of the Marshall group American missionaries and German and English trade-agents are the white residents. Ebon Atoll, the chief station of the missionaries, and Namorik, export but little. Milli Atoll produces for export 90 tons of copra. The exportation of Arnho, with 3,000 inhabitants, is 220 tons, divided between the Hernsheims and the South Sea Trading and Plantation Company, and the English house of Henderson & Macfarlane. The export of *majuro*, 350 tons, passes mainly through English hands. The produce of both islands is often greatly diminished by native wars. In Jaluit, which produces 70 tons, and exports large quantities collected by the traders from the other islands of the group and the Caroline Islands, the German firms alone are represented.

Spanish Claims of Sovereignty.—In the absence of any contending claims, the Caroline Islands, or at least the Central Carolines and the Pelews, have usually been considered as forming a part of the colonial empire of Spain. They were discovered by Spaniards; they lie near Spanish colonies; until recent times the Spaniards alone held communication with the islanders; and they have been marked on the maps as Spanish territory since their discovery in the days when Spain and Portugal were the only colonizing powers, and when the whole New World was divided between them in a bull issued in 1594 by Pope Alexander VI, who drew a line across the map as the boundary of their respective dominions. The Spanish Government has exercised authority over the islands by such acts as carrying off the entire population of some of the smaller ones to the Ladrones. Its sovereignty was never contested until the question was raised by the English and German Governments in 1875 in connection with an attempt of the Spanish consul at Hong-Kong to perform official acts with reference to the Carolines. He demanded that certain natives of the islands who were rescued at sea should be placed in his care, and that a German vessel clearing for the islands should call at one of the ports declared open for trade. On March 4 of that year Mr. Layard and Count Hatzfeldt presented simultaneous notes denying that Spain had any jurisdiction over the islands. Mr. Layard's note said that her Majesty's Government refused to admit the right claimed by Spain over the Caroline or Pelew Islands, "over which she has never exercised, and does not now exercise, any actual dominion." The German note was of the same purport. To these protests no answer was ever returned by the Spanish Government. In the German note Count Hatzfeldt said that "in accordance with the principles of modern international law the Imperial Government would not be able to recognize those alleged rights" (of sovereignty and power to levy customs) "in so far as they are not sanctioned by treaty, or appear to have been *de facto* exercised." In 1876 Señor Canovas del Castillo, when Prime Minister, said to Mr. Layard that Spain had never claimed sovereignty over the Caroline group. The following year the Foreign Minister, Señor Calderon Collantes, officially declared that the pretensions of Spain in the Eastern Archipelago were limited to Sulu and the adjacent islands. The British Government sent a squadron in 1882 to punish the natives of the northern island of the Pelew group for an outrage committed on a wrecked British crew two years before, and on the report of outrages on the natives committed by O'Keefe's agents in Yap, sent a man-of-war to investigate the matter.

In the spring of 1885, after Germany had planted her flag in Papua and New Britain, and had laid down the doctrine at the Congo conference that the effective exercise of sovereignty alone confers sovereign rights, the Spanish governor of the Philippines published a decree ordering the naval authorities to make arrangements, for the purpose of taking effective possession of the island, to send war-vessels to Yap to hoist the Spanish flag.

The spring and summer passed away without this intention being carried out, until the dispatch of a German gunboat for the purpose of occupying them in the name of Germany impressed the Spanish authorities with the necessity of prompt action.

In August naval Lieutenant Capriles was commissioned as governor of the Caroline and Pelew Islands, and sent in the steamer Carriedo to take possession, with an infantry lieutenant as his secretary, 28 soldiers, and 25 convicts to build stations. He was accompanied by four Spanish monks, who went to convert the natives.

The natives of Yap, who suffered from the arbitrary and unjust dealings of O'Keefe and the other Europeans, and who wished a stop to be put to the endless wars among themselves, petitioned the Governor-General of the Philippines for a Spanish protectorate in September, 1884. Captain Holcombe, the American trader, prepared and presented the document on their behalf. In February, 1885, the corvette Velasco visited the islands, but did not consummate any form of annexation. In July, 1885, an appropriation of money for the administration of the islands was included in the budget of the Philippines.

The Planting of the German Flag.—The Spanish vessels Manila and San Quentin arrived at Yap August 23, and began to make preparations for taking formal possession of the island. Señor Capriles, as governor, selected a site for a flag-staff and made a formal declaration of the act, attested by his staff and the friars accompanying the expedition. On the night of August 24 the German gunboat Iltis steamed into the harbor and landed men, who hoisted the German war-flag and took possession in the name of Germany. The imperial flag unexpectedly met the view of the Spaniards the next morning. The newly appointed Spanish governor wished to pull it down and effect an occupation by force, but was restrained by the naval commander, to whom Gen. Terreros had given orders to avoid any conflict with the Germans. The Spanish officers delivered to the German commander a formal protest. Captain Espana then re-embarked the cattle and materials and returned to report to the Governor-General at Manila. The Spanish commanders were ordered, before the news reached Spain, to complete the Spanish occupation of Yap if their force was equal to that of the Germans. The cruiser Velasco left Manila for that purpose. The Iltis called at Manila to report by telegraph to the German Government. The troops on the Velasco, afterward replaced by the Valiente, took possession of the island.

Excitement in Spain.—The German attempt to annex the Caroline Islands suddenly chilled the cordial feelings existing between Spain and Germany, and roused a sentiment of animosity to Germany so strong that it seemed likely to produce a war between the two countries. The effusive warmth of feeling manifested by the visit of King Alfonso to Germany, led to the insult of the Spanish King by a Parisian mob and the estrangement from France of all parties but the Republicans. The cause of the intimate relations between the Spanish and German Governments was the service rendered by Germany in introducing Spain into the European concert after seventy years of existence as a second-rate power. Jules Ferry, during his first ministry, suggested the idea and proffered his services, but Count de la Vega, the Spanish Foreign Minister at the time, preferred to accept the offices of Germany. The project has not yet been carried out. The Caroline

GATEWAY OF RUINED INCLOSURE, STRONG'S ISLAND.

incident was now made the most of by the Spanish Republicans, and was also used by the Liberal opposition for political purposes, while anti-German sentiment in France found a vent in inspiring Spanish hostility to Germany. The cities of Spain became the scene of demonstrations against Germany, which, besides expressing a general sentiment that the Germans had presumed upon the military inferiority of Spain to override her well-defined and substantial rights, were the cover of a Liberal assault upon the ministry, a Republican manifestation against the form of government, a Carlist attack upon the dynasty, and an outpouring of the French spirit of revenge inspired by the strong French influences in Spain.

The official press at first expressed the general indignation, and no steps were taken by the Government to check the outburst until the popular mind was dangerously excited, while the conciliatory attitude of the German Government gave hopes of a peaceful issue not derogatory to Spanish honor. When the Government began to frown upon the demonstrations, they were taken up by all the opposition elements and became extravagant and furious. The German Government was prepared for remonstrances and for a course of bickering after the manner of the colonial disputes with England; but it was surprised at so angry an ebullition of national ill-will, and was impelled to alter its policy accordingly.

A demonstration of the political and social clubs of Madrid took place on August 23, the previous prohibition of the Government having been withdrawn. A procession of thirty thousand persons marched through the streets, cheering Spain and the army, and stopping to listen to patriotic speeches from the balconies of the political and military clubs. On the 26th demonstrations were held in Seville, Santiago, Corunna, and other towns. The Government resorted to repressive means to quell the excitement. A military officer was disciplined for taking part in the demonstrations, and the Army and Navy Club was closed because it struck all German names from the list of honorary membership, including that of the Prussian Crown Prince. Gen. Salamanca and other officers sent back German decorations with which they had been complimented.

On the evening when the official telegram reporting the German occupation of Yap reached Madrid, September 4, a concourse of people rushed to the German legation, tore down the imperial arms and flag-staff, and publicly burned them in the Puerta del Sol, with cries of "Down with Germany!" and then gave an ovation to Gen. Salamanca on account of his declarations of hostility to Germany. The police arrested sixty of the demonstrants, a guard was placed at the German legation, and orders were given to suppress riotous demonstrations by force of arms. The following evening a crowd gathered about the royal palace, shouting, "Long live Spain!" "Long live King Alfonso!" The Liberal press called upon the Government to declare war. In Valencia the German flag was insulted in the same way as at Madrid. In Saragossa and other towns similar demonstrations took place. Many merchants trading with Germany countermanded their orders. The excitement continued for weeks at Barcelona, Valencia, and other republican centers. Many newspapers were confiscated or denounced by the authorities. About two hundred persons were arrested for seditious cries in different towns.

On the day of the Madrid outbreak there was momentary danger of anarchy. The ministers hesitated to employ the Civil Guard to repress the demonstration, and after they were sent they began to fraternize with the mob. Captain-General Pavia marched to the spot at the head of his troops; but order was not completely restored for three days. It is said that the ministers proposed to declare war against Germany, but that the King refused to sign the decree, and declared that, if the country in the end insisted upon war, he would abdicate rather than share the responsibility of the ruin of Spain.

Count Solms, the German minister, demanded satisfaction for the insult to the legation. Señor Elduayen, in a note dated Sept. 10, informed the German Government that the police officers charged with protecting the legation and the German consulate at Valencia had been dismissed, and that the supposed ringleader and fifteen others had been committed to trial for the Madrid outrage.

The Ministry of the Marine was authorized to purchase two fast cruisers in England.

Diplomatic Correspondence.—In a note to Spain, dated Aug. 9, Germany made known her intention to establish her sovereignty in the Caroline Islands without prejudice to the claims of other powers. The Spanish Government replied, claiming sovereign rights over the islands, and declaring the intention to take possession immediately. The German commander was meanwhile on the way to the Carolines and beyond the reach of telegraphic communication, and the Spanish authorities in the Philippines were instructed to take formal possession of the islands if there was yet time before the German flag was raised over them. Immediately upon receiving the news of the German occupation of the Caroline Islands the Spanish Government sent a protest to Germany. The German reply was that no official notice of the occupation had been received, and that, if it had taken place, the German Government would annul the act if it was found that Spain's claims were well founded. The Spanish ministry thereupon sent a vigorously worded note denying that the Spanish claims admitted of discussion. The German Government replied by telegraph, Aug. 24, that it was prepared to consider the Spanish claims in the most friendly spirit, and added that the German protectorate was established after an investigation of legal and historical evidence that led to the belief that the islands were ownerless territory, upon the repeated request of German subjects trading in the Caroline Islands, and with no intention of infringing upon prior rights. The German Government expressed a willingness to submit the question to arbitration, if necessary.

On Aug. 31 Prince Bismarck addressed a note to the Spanish Government, in which he argued against the Spanish claim. German merchants, he said, had settled on the islands, and by their industry and sacrifices had developed trade and production, in the belief that the islands were ownerless. They would not have established themselves there if they supposed that the islands stood under Spanish sovereignty, because in Spanish colonies difficulties are thrown in the way of foreign trade. There were, he said, no indications of Spanish authority in the islands. Spain had not answered the German and English note, nor had she exercised the sovereign rights claimed at that time, nor given notice, as is customary, at any later date of an intention to annex the islands. He closed with a proposal to submit the question to the arbitration of a power friendly to both claimants. In the German note, received in Madrid Sept. 3, it was intimated that, if Spain could show that her ships had *de facto* taken possession of Yap before the arrival of the German vessel, the German Government, guided by the rule it had uniformly upheld, would abandon its claim to the island. Count Hatzfeldt, the German Foreign Secretary, informed Count Benomar, Spanish minister at Berlin, that the instructions of the commander of the German gunboat were not to hoist the German flag if he found the Spanish flag already planted in the islands. Count Solms in Madrid explained that if the German Government had been aware of Spanish claims before dispatching the gunboat, it would have put off the occupation until an understanding could be reached.

On Sept. 7 Count Solms, the German minister at Madrid, communicated to Señor Canovas the intention of Germany to retire from Yap pending the arrangement of the dispute. The Emperor William telegraphed to King Alfonso that he had no intention of trenching upon Spanish rights. The publication of the conversation held between Señor Canovas and Sir A. H. Layard in 1876 placed the ministry in an awkward predicament. In the latter part of September Señor Canovas drew up a memorandum, in reply to a note from Mr. de Bunsen, British *chargé d'affaires*, recalling the disavowal of sovereignty over the Caroline Islands, in which he explained away the significance of his former admission, and reasserted the absolute sovereignty of Spain over the whole of the Caroline Islands, while offering to make commercial concessions and signifying a willingness to accept the proposed mediation of the Pope of Rome.

In a note to Count Benomar, dated Sept. 10, the Spanish minister said that the natives of the islands recognized Don Alfonso as their sovereign, and reminded the German Government of the royal order to establish local authority at Yap, published in March. He pointed out that the doctrine of effective occupation agreed to in the Berlin Conference applies only to Africa. The note concluded by offering to Germany free trade with the Carolines and Pelews, the right to establish factories and plantations, and a site for a naval station in the islands.

THE KING'S HOUSE, STRONG'S ISLAND.

The Spanish Government at first rejected the proposition to arbitrate, declining to admit that there was any material for arbitration. England and Italy offered friendly counsel to Spain to accept this mode of settlement, and France, Russia, and Austria-Hungary approved the advice. The Spanish Government finally agreed to accept the German proposal to submit the dispute to the Pope for his mediation if the two powers were unable to come to an understanding by direct negotiation. The German Chancellor was willing to accept any solution of the question of the Carolines, which had placed the Spanish crown in peril, if not the European peace, and led to the personal interference of the Emperor William, provided the settlement did not yield the principle he upheld requiring substantial settlement or effective jurisdiction as a condition of recognizing claims to a sovereignty or protectorate. He refused to admit that, if the prior arrival of the Spanish vessels was to be construed as effecting a title to possession, the other islands were affected by the result, and gave out that Germany would not recognize any claims based upon the contiguity of the islands to Spanish possessions or on the right of discovery, the Papal grant, or other historical grounds.

The Emperor William and King Alfonso each addressed a letter to the Pope, asking him to consent to act as mediator. He signified his willingness on Sept. 26. Pope Leo was gratified, because he has considered it one of his duties to act as a mediator between princes, and between princes and their people. According to the numerous precedents, both parties are required to submit the evidence and documents relating to their claims, which are discussed in a special congregation of the cardinals, and their conclusions are submitted to the Pope for his final decision.

In a note dated Oct. 1, Prince Bismarck argues against Spain's historical pretensions, and denies that Germany in 1875 disclaimed the intention of ever acquiring colonies. On the 13th of October the Spanish Government forwarded a dispatch definitely accepting the mediation of the Pope, who formally accepted the task on Oct. 21.

The United States Government addressed a note to the Spanish Government after the reference to the Pope was agreed upon, intimating that if the sovereignty of Spain over the islands was recognized, it expected that the American Protestant missions would be respected, and complete freedom of religion allowed. The German and Spanish Governments came to an agreement by which Germany recognized a prior occupation of Yap and waived all claims to the islands, with reservations as to the Marshall and Gilbert Islands. The matter was laid before the Pope, subject to this understanding. His office was thus confined to recording the decision already agreed upon on the main question.

CARPENTER, WILLIAM BENJAMIN, an English biologist, born in Exeter, Oct. 29, 1813; died in London, Nov. 10, 1885. His father, the Rev. Dr. Lant Carpenter, was an eminent Unitarian minister and a writer on theological subjects, who removed to Bristol in 1817, and the son's earlier life became identified with that city. Beginning study under his father's personal direction, he developed a special taste and aptitude for physics and chemistry, and in the choice of a profession expressed a preference for that of civil engineer. But no suitable opportunity offering in that didirection, he entered upon the study of medicine in 1828 under Dr. J. B. Estlin, a brother-in-law of Dr. Pritchard, the ethnologist, attending also the lectures at the Bristol Medical School. His studies were interrupted in the winter of 1832 by a visit to the West Indies in company with his tutor, but were resumed on his return to Bristol; and he continued them in 1834 at University College and Middlesex Hospital, London, and afterward in the University of Edinburgh, where he received the degree of M. D. in 1839. In the mean time he had been appointed Lecturer on Medical Jurisprudence in the Bristol Medical School, where he continued engaged also in the practice of medicine till 1844, when he became Fullerian Professor of Physiology in the Royal Institution. In 1844 he was made a Fellow of the Royal Society; in the next year, a lecturer in the London Hospital; in 1847, a lecturer on geology in the British Museum, one of the examiners of the London University, and editor of the "British and Foreign Medico-Chirurgical Review"; in 1849, Professor of Medical Jurisprudence at University College; and in 1852, Principal of University Hall.

Dr. Carpenter began the researches with which his name is associated, and the publication of results upon them, while still quite young. Among his earliest contributions was a paper "On the Voluntary and Instinctive Actions of Living Beings." Before he was twenty-five years old he had published articles on "Vegetable Physiology" and "The Physiology of the Spinal Marrow," and a review of that part of Whewell's "History of the Inductive Sciences" which relates to physiology. On taking his degree in 1839, he published a thesis "On the Physiological Inferences to be deduced from the Structure of the Nervous System of Invertebrated Animals," and for it he gained a gold medal. He selected the functions of the nervous system as the special branch in which he would engage. In a review of Noble's "Physiology of the Brain" he exposed the unscientific character of the claims of phrenology, extended the idea of reflex nervous function to the centers of sensation and ideation, and enunciated the fundamental notions of "consensual" and of ideo-"motor" action with such effect that the author of the book gave up the chief hypotheses which he had endeavored to enforce. In "Mesmerism, Spiritualism, etc., Historically and Scientifically Considered," he classified the phenomena which these titles cover, and others related to them, under their proper heads, and endeavored to explain them as produced "by the automatic action of the mind under the influence of suggestion, the will being in abeyance."

His appointment in 1856 as Registrar of the University of London, securing him a competent support without the drudgery of teaching and lecturing, gave him liberty to follow the bent of his own genius in independent investigation. In this year he published "The Microscope and its Revelations," a work that was invaluable to the students of his day, and still presents an admirable exposition of the principles on which the instrument depends. He engaged in special studies of the Australian and Philippine Foraminifera, the results of which were given in memoirs to the Royal Society and the Ray Society, between 1856 and 1860. In these papers, according to Sir B. Brodie, he showed the fallacy of the then current system of classification, and laid the foundation of a natural system, based on those characters in the internal structure and conformation of the shell which are most closely related to the physiological conditions of the animal. More recently he was prominently connected with the investigation of the results of the deep-sea dredging expeditions which have been sent out from time to time, culminating in that of the Challenger, in which he was associated with Mr. J. Gwyn Jeffreys and Sir Wyville Thomson, both dead before him. These investigations, by Dr. Carpenter and others, have added immensely to our knowledge of the physics of the sea, including the phenomena of ocean-currents, and the phenomena and conditions of animal and vegetable life. As associated with his researches in these branches may be mentioned also his reports on the microscopic structure of shells, presented to the British Association in 1844 and onward; his part in the discussions of the organic nature of *Eozoön Canadense;* and his monograph on the structure of the feather-star. His most important works were the "General and Comparative Physiology," the first edition of which was published in 1838, and the "Human Physiology," which was first published in 1844. The former work, though long out of print, is hardly, even now, much behind the times; and of the latter and the work on the microscope, it may be said that though they were first published long before the biological sciences had attained their present magnitude, they were based on knowledge so wide, and were so thoughtfully elaborated, that editions of both are still called for. In these works, Dr. Carpenter was an earnest advocate of the doctrine of development by natural causes, and always insisted that it was compatible with theism and stimulating to the religious emotions. His latest work in the physiological series was the "Principles of Mental Physiology," and it is used as a text-book in some of the higher institutions of learning. He has delivered lectures in the United States on "Human Automatism," and the results of the deep-sea investigations. He was President of the British Association in 1872, and was a member of the principal learned societies in his own and other countries. He was, moreover, "essentially a good citizen," and took the highest interest in social questions, on which he threw the light of his scientific knowledge. In this line were his lectures on temperance, which have been widely circulated in many countries, but he had occasion to modify some of the views expressed in them. His papers were characterized by a remarkable clearness of expression, which resulted from the thorough mastery he possessed of every subject on which he wrote.

WILLIAM BENJAMIN CARPENTER.

In 1861 Dr. Carpenter received the Royal Medal of the Royal Society; in 1871, the degree of LL.D. at Edinburgh; and in 1873 he was elected a corresponding member of the Institute of France.

Dr. Carpenter's death was due to burns caused by upsetting a gallipot of ignited spirits, with which he was taking a hot-air bath.

CHARITY ORGANIZATION, a banding together of the various benevolent institutions in a large city, for mutual protection against imposition, for more effective working in the matter of relief, for the economic disbursement of alms-funds, for the improvement of the condition of the poor, and for the reform of abuses. This requires the co-operation of the mayor, the chief of police, and all who are concerned in official relief-work. It should have also the co-operation of every church, every asylum, every benevolent society, fraternity, or citizen, so far as private relief-work is concerned. The New York State Board of Charities adopted, Oct. 11, 1881, the following:

> *Whereas*, There are in the city of New York a large number of independent societies engaged in teaching and relieving the poor of the city in their own homes; and whereas, there is at present no system of co-operation by which these societies can receive definite mutual information in regard to the work of each other; and whereas, without some such system, it is impossible that much of their effort should not be wasted, and even do harm by encouraging pauperism and imposture: therefore
>
> *Resolved*, That the Commissioners of New York City are hereby appointed a committee to take such steps as they may deem wise, to inaugurate a system of mutual help and co-operation between such societies.

Thereupon those commissioners caused a constitution to be prepared, and invited certain men to become members of the central council. These men, and some *ex-officio* members, met on Feb. 8, 1882, and organized the council and society. The constitution provides that the society shall be conducted upon the following fundamental principles:

> Every department of its work shall be completely severed from all questions of religious belief, politics, and nationality.
>
> No person representing the society in any capacity whatsoever shall use his position for the purpose of proselytism or spiritual instruction.
>
> The society shall not directly dispense alms in any form.
>
> The objects of the society shall be—
>
> To be a center of intercommunication between the various churches and charitable agencies in the city.
>
> To foster harmonious co-operation between them, and to check the evils of the overlapping of relief.
>
> To investigate thoroughly, and without charge, the cases of all applicants for relief that are referred to the society for inquiry, and to send the persons having a legitimate interest in such cases full reports of the results of investigation.
>
> To provide visitors, who shall personally attend cases needing counsel and advice.
>
> To obtain from the proper charities and charitable individuals suitable and adequate relief for deserving cases.
>
> To procure work for poor persons who are capable of being wholly or partially self-supporting.
>
> To repress mendicity by the above means and by the prosecution of impostors.
>
> To promote the general welfare of the poor by social and sanitary reforms, and by the inculcation of habits of providence and self-dependence.

There is a central office at No. 21 University Place, where the Council meets and the general business of the society is transacted, and where record is kept of all its work. At the beginning of the active work of the society, many societies and churches agreed to use it as a medium through which to exchange information in regard to their mutual beneficiaries. The Department of Public Charities and Correction also agreed to give all the information it might have about those who received city coal, and money appropriated for the relief of the adult blind, and about those persons committed to the penitentiary and to the work-house.

Registration.—Registration is done by means of cards upon which each reporting society transcribes all the information it gives to the society in regard to each case that it has helped. A number on the card shows the society or church from which it comes. These cards are arranged alphabetically in locked drawers. When it is found by this means that two or more societies have helped the same family, a notice is sent to each society, showing what the others have done for it. These cards are shown to no one that is not known to have a right to see them, nor is the information they contain given to any but those who have a right to it. A street-register has been made by taking all the names from the alphabetical cards, and putting them on other cards, according to streets and street-numbers. These cards are arranged by the street-numbers, and each street is kept in a package by itself. By looking over one of these packages, a person can tell how many families in a street have received charitable relief, or have had members in the penitentiary. It is found from this street-register that alms-getting families tend to congregate. A dozen such families are often reported as living at one street-number. The greatest number of families reported from one house is eighty-three. This shows that the habit of looking to charity for support is contagious.

Information.—The central office receives information from all the societies, churches, and individuals that will furnish it. Two hundred and one societies and churches have agreed to send to the society the name, address, and all they know of those that receive help from them, or apply to them for help. The cards are arranged alphabetically. Of course, where several cards bearing the same name and address are received from various sources, they come together, and the "overlapping of charitable relief" is at once discovered, and each society interested is told of all that the others have reported concerning that individual whom all have been helping. The card system renders it certain that the information received shall be kept private wherever the person helped applies to only one church, or society, or individual; for, once in the cases, unless some inquiry comes concerning that special person, the card is probably never looked at again, as it is one among 96,496 that are now filed in the central office. One of the results of the work of the society in Boston was said to be that "it had taught the poor that it was bad policy to lie." In one case a woman was arrested whose baby of two months had been four times baptized in as many weeks!

The number of houses registered by the New York society as occupied by the dependent or vicious classes reaches 21,410.

Charitable Work.—In such a vast city, the only way to obtain any hold at all upon the poor is to take a comparatively small area and confine one's labors to that, seeking to gain the same sort of knowledge concerning it and its inhabitants that the people of a village or small town have of one another. The great danger of a city comes from the absolute independence of each other of its inhabitants. There is no human tie, no relation to each other; local public opinion has no influence over individuals, because it does not exist; each family lives by itself and for itself, and is lost in the host that surrounds it. The ideal of the district office is a place known to the poor of the district, where they may come for advice, for help in every kind of trouble; where they may find a friend who will think with them, work with them, struggle by their side, until some means have been found to lift them out of their distress—a place known to the well-to-do of the district, where they may meet together and may discuss plans for helping all their neighbors, rich and poor, as well as themselves.

For purposes of convenience, the city has been divided into districts, at present covering the east side of the city from Houston to Seventy-ninth Street, and on the west from Houston to Fifty-third Street. The idea is, to have a place where the poor can find a friend without a weary journey. Each district has its own committee. These committees are composed of men who give time and labor in seeking a solution of the great difficulties that surround the questions of poverty and charity. Each committee has an office, located conveniently in its district, and each has its paid agent, whose duty it is to meet the poor of the district who call or are reported at the office, to investigate each case and confer with the committee as to the best method for its relief. The society has found men and women willing to act as "friendly visitors." These are people that volunteer to visit and stand by the poor families committed to their care. They are pledged not to *give* relief, except in extreme cases, as the families are apt to be demoralized if they receive direct aid. The main idea is, to help people to help themselves. Employment frequently solves this difficulty. After this has been procured, comes the need of some one to teach providence. All this is the work of the friendly visitor.

The society is often used as an agency for inquiry concerning the standing and work of the various charitable enterprises, by those from whom they solicit contributions. It has also been useful to charity organization societies of other cities in England and this country in investigating cases, and verifying statements, in receiving and forwarding beneficiaries, seeking for missing persons, etc.

The Labor Markets.—In February, 1883, the Council appointed a committee to see to what extent the society could avail itself of the various labor markets of the United States, in behalf of its applicants who pleaded for self-supporting work which they had failed to find in this city. The same state of things was found to exist in all of the twenty-five large centers with which the committee corresponded; and the only openings that were found were along the lines of the railways in the far West, South, and Southwest, where ample work waits for tens of thousands of rough-and-ready hands willing to brave the toils and privations of frontier life. But few families are found in the city that are willing thus to sunder social ties and be placed where they must work or starve, especially if they have had a taste of the "poison of unearned bread." The great majority prefer to eke out a precarious existence in the city, and fall back upon charity.

Early in 1884 the Committee on Co-operation held a conference with several relief societies, and called their attention to the fact that a careful analysis of several thousand cases showed that, of the relief given, over 65 per cent. was apparently to able-bodied men, who should be self-supporting. The outcome of the conference was a resolution "that all aid given to able-bodied men should be for the purpose of enabling them to find employment in or out of the city." A second conference shortly followed, at which the establishment of a "Central Labor Exchange for Males" was urged upon the constituents of the society by a circular in which the several relief agencies and private donors were asked if they were willing to join in and contribute toward the formation and support of a free labor exchange; and if each would statedly furnish information as to the number, character, trades, and employments of the able-bodied men occasionally or habitually relieved by them. But the difficulty of getting concerted efforts toward the desired end has kept the matter thus far in abeyance.

Work accomplished.—The whole amount of work, so far as it can be shown by statistics, is as follows: 9,344 distinct applications for help were made at the offices. These may be counted at a moderate estimate to represent 32,000 persons. Of the 9,344, only 5,169 were found to be such as could be taken in charge by the society; the rest were simply referred to some probable source of help. Among those taken in charge, but 327, or less than 7 per cent., were found to require continuous relief, and of these 288 were put into hospitals, asylums, or homes. Less than one fourth (1,269) were found to need temporary relief, and relief was secured on 1,468 occasions from churches, societies, the Department of Public Charities, or private individuals. But more than half of all the families that came under the care of the society needed work rather than relief, and these included those who by reason of infirmities or family cares could only do special work, and those who were shiftless or intemperate, but who might be educated to independence. This array of people needing "work rather than relief" numbered 2,698 (that is, the number of applicants). Each probably had two or three others dependent on him, and of these only 566 could be supplied with permanent and regular work, while temporary or occasional work was found for only 853, leaving more than half without the one thing they most needed. Besides all those mentioned above, there were 875, or about 17 per cent., who could not be helped because of their own vices; and of these 307 were frauds who were exposed or suppressed by the district committees, while 1,153 begging cases were, during the same year, dealt with by the special officer engaged in that work. Among these latter, 716, or 63 per cent., were able-bodied, and only 60, or 5⅕ per cent., were apparently needy and worthy, all of whom were almshouse cases; and 157 were not destitute and had the means of self-support, while 504 were persistently dissolute.

Reports for 1885 show 572 cases made self-supporting by employment, loans, removing burdens, etc., 364 cases adequately helped by developing their own resources, 156 cases emigrated where they could be self-supporting, or relatives could care for them; in all, 1,092 families taken off the relief provision of the city.

Street-Beggars.—Experience with the problem of street-begging convinces the society that there is absolutely no need or justification for it. For the 5 per cent. possibly worthy and needy, there is abundant provision, which may be reached by application to any relief agency, to the police, or to any office of this society.

During 1885 the Council undertook to fulfill its pledge to the public to make every effort to put an end to the evils of street-begging. A special officer, commissioned as deputy-sheriff, deals with this class, with many satisfactory results. It is his duty to follow up all persons found soliciting or receiving alms upon the street, with a view to a proper and speedy provision for them if needy and worthy, and to their removal from the streets and their proper discipline if found to be fraudulent or professional beggars. The society has published several tracts bearing upon the general subject of organized charity, and also a classified directory of the charitable resources of the city. A library for reference and information of visitors and district workers has been begun.

There are at present forty-nine charity organization societies in the United States, and there is one in every large town in Great Britain. The cost of maintaining the New York society for a year is about $25,000. Its principles will not permit it to receive money from public funds; it is supported entirely by private contributions.

CHEMISTRY. Chemical Philosophy.—In his address as Vice-President of the Chemical Section of the British Association, Prof. H. B. Armstrong urges, as now very desirable, a more earnest and more minute study of the subject of chemical action. He defines chemical action as being any action of which the consequence is an alteration in molecular constitution or composition; it might concern molecules which are only of one kind—cases of mere decomposition, of isomeric change, and of polymerization; or it might take place between dissimilar molecules—cases of combination and of interchange. Hitherto it appeared to have been assumed that action took place directly between A and B, producing A B, or between A B and C D, producing A C and B D, for example. In studying the chemistry of carbon compounds, they became acquainted with a large number of instances in which a more or less minute quantity of a substance was capable of inducing change in the body or bodies with which it was associated without apparently itself being altered. But so little had been done to ascertain the nature of the influence of the contact-substance, or catalyst, as he would term it, that its importance was not duly appreciated. Recent discoveries, however, must have given a rude shock, from which it could never recover, to the belief in the assumed simplicity of chemical change. The inference that might be drawn from Mr. Baker's observations on the combustion of carbon and phosphorus—that those substances in purity were incombustible in pure oxygen—was indeed startling. But if it were a logical conclusion from the cases now known to us that chemical action was not possible between any two substanees other than elementary atoms, what was the function of the third body, the catalyst, and what must be its character with reference to one or both of the primary agents? The speaker had once defined chemical action as reversed electrolysis, stating that in any case in which such action was to take place it was essential that the system operated upon should contain a material of the nature of an electrolyte. Prof. Armstrong agreed, with Lothar Meyer, that the negative elements tend to exhibit a higher valency toward each other than toward positive elements; and that, in the majority of so-called molecular compounds, the parent-molecules are preserved intact by being held together by the "surplus affinity" of the negative elements. More attention ought to be given to the study of the structure of bodies; and it is not improbable that, especially in the case of compounds other than those of carbon, chemical change involves change in structure more frequently than we are apt to believe.

Complaints are not unfrequently made that a large proportion of published work in chemistry is of little value, and that chemists are devoting themselves too much to the study of the carbon compounds, and especially of synthetic chemistry; that investigation is running too much in a few grooves, and that chemists are gross worshipers of formulæ. But the attention paid to the study of carbon compounds may be more than justified, Prof. Armstrong thinks, both by reference to the results obtained and to the nature of the work before us. "The inorganic kingdom refuses longer to yield up her secrets—new elements—except after severe compulsion. The organic kingdom, both animal and vegetable, stands ever ready before us. Little wonder, then, if problems directly bearing upon life prove the more attractive to the living. The physiologist complains that probably 95 per cent. of the solid matters of living structures are pure unknowns to us, and that the fundamental changes which occur during life are entirely enshrouded in mystery. It is in order that this may no longer be the case that the study of carbon compounds is being so vigorously prosecuted." The investigations now being published show great improvement in quality. At no time has more attention been given to the discovery of all the products of the reactions studied, and to the determination of the influence of changes in the conditions. The great outcome of the labors of carbon chemists has been the establishment of the doctrine of structure; that doctrine has received the most powerful support from the investigation of physical properties, and it may almost, without exaggeration, be said to have been rendered visible in Abney and Festing's infra-red spectrum photographs. Some of us look forward to the extension of the doctrine of structure not only to compounds generally, but even to the "elements." The relationships between these are in so many cases so exactly similar to those which obtain between carbon compounds, which we are persuaded differ merely in structure, that it is almost impossible to avoid such a conclusion, even in the absence of all laboratory evidence.

Opening a discussion on valence in the Chemical Section of the American Association last year, Prof. F. W. Clarke remarked that the theory of valence was an attempt to explain the arrangement of the atoms in a molecule. It was especially useful in explaining isomerism and in synthesis. The exposition of it was at a disadvantage on account of the necessity of making the representation on a plane surface, while a space of three dimensions was really demanded to exhibit the true state of affairs. Prof. W. Ramsay thought that a study of the heat of formation of many compounds would be a key to the valence of the elements; and said that the difficulties of conceiving of the motions of the atoms were well illustrated in Sir William Thomson's efforts to explain them by his theory of complex vortex evolutions. The discussion then turned upon the method of teaching valence. Prof. Ira Remsen thought the student should become well acquainted with the properties of the compounds before being introduced to the theory; and in this Mr. A. H. Allen, Prof. Dewar, and Prof. Ramsay, substantially concurred with him. Prof. J. W. Langley, Vice-President of the Section, said that valence, or chemism, may be a force emanating from the atom, or it may be a force outside tho atom. It is static, or dynamic, and a knowledge of it is more a physical than a chemical problem. From the educational point of view, he thought it better to use the theory of valence in connection with the history of the theories concerning atoms and molecules. As a further step the language and figures of magnetism might be used.

W. W. J. Nicol has proposed the theory that the solution of a salt in water is a consequence of the attraction of the molecules of water for a molecule of salt exceeding the attraction of the molecules of salt for one another. It follows, therefore, that as the number of dissolved salt-molecules increases, the attraction of the dissimilar molecules is more and more balanced by the attraction of the similar molecules; when these two forces are in equilibrium, saturation takes place. Any external cause tending to alter the intensity of either of these two opposite forces disturbs the condition of equilibrium, and further solution or solidification ensues. The contraction which occurs on the solution of a salt in water has been regarded as strong evidence in favor of chemical combination having taken place, but the author finds that a further contraction occurs on further dilution, even when the number of water-molecules per salt-molecule is far in excess of the number in the cryohydrates.

In a paper before the Chemical Society on "Chemical Changes in their Relation to Micro-Organisms," Prof. Frankland makes a distinction between organized ferments and certain bodies which bring about analogous chemical changes, but which are not only not organized, but exist in solution. These latter, or "soluble ferments," as they are commonly termed, are said to act by contact. They produce certain chemical changes in the fermentescible substances without themselves furnishing from their own substance any of the products of change; and the effects they induce are essentially analytical. The micro-organisms, producing also analytical effects, were regarded by Prof. Frankland as of animal nature, because that is one of the properties of animal life, while plants are organisms performing synthetic functions. The changes effected by these organisms are essentially of the same character as those brought about by the higher orders of animals; that is, they are all changes by which potential becomes actual energy. With one or two exceptions, these changes also—unlike those produced by soluble ferments—can not be brought about by other means. Observations have shown that micro-organisms preserve their vitality in presence of a variety of substances which rapidly prove fatal to higher animals; but the unexpected fatal effects of spongy iron seem to promise that there are substances fatal to bacterial life which have no toxic effect on the more highly organized animals. No degree of cold has yet been shown to be fatal to them. With regard to heat, the lowest fatal temperature recorded is 40 C., but many species can withstand much higher temperatures. Prof. Frankland related some experiments he had made with urine, which showed how closely chemical changes going on in the fluid were connected with the development and growth of micro-organisms within it. Prof. Burdon-Sanderson spoke of the difficulty, and often impossibility, of distinguishing between different organisms as constituting the main difficulty in studying them. Prof. Ray Lankester remarked that it was curious that the nitrifying organism had never yet been isolated; its presence had only been inferred, and it had never been satisfactorily separated and identified. Dr. Brunton said that it was highly probable that the symptoms occurring in certain diseases were due to poisons formed by the action of organisms, and not directly to the organisms themselves. This was probably the case in cholera. Micro-organisms may even produce substances fatal to themselves—e. g., phenyl compounds. This is also the case with higher organisms, the retention of urine in man being often attended with fatal results. Pepsin converted albuminoids into peptones, but it was important to note that Brieger had observed that an alkaloid, having an action similar to curare, was formed during peptic digestion, and an alkaloid having a similar action had been obtained from human urine. These facts rendered it probable that alkaloids might be formed in the intestinal canal and absorbed into the general circulation.

Nomenclature.—The Committee on Chemical Nomenclature of the British Association recommend the retention of the terminations *ous* and *ic* and *ate* and *ite* and the prefixes *hypo* and *hyper*, as they are ordinarily used, as being fixed terms, with well-understood meanings not liable to be misunderstood. In case a metal whose two salifiable oxides are represented by names terminating in *ous* and *ic* forms also an acid-forming oxide, the distinction is made sufficiently clear by designating the last as an anhydride (or acid). Indifferent oxides may be classified and named by regarding them as compounds of salifiable with acid-forming oxides, as when Cr_2O_4 is called chromic chromate. Of the prefixes *hypo* and *sub*, custom applies the former to acids and acid-forming oxides, and the latter to salifiable and indifferent oxides. The termination *ous* should be written *ious* or *eous* as seldom as possible. In the names of salts of which only one class is known, it is not a matter of much difference whether we say, for instance, *magnesium sulphate* or *magnesic sulphate* except in the case of carbon compounds, when neglect to affix *ic* to the names of the positive radicals in ethereal salts may lead to confusion in the spoken name. Thus the ear can not distinguish between *ethyl phenylacetate* and *ethylphenyl acetate;* but all ambiguity is removed by saying *ethylic phenylacetate* and *ethyl phenylicacetate.* In complex cases where the modes of naming by *ous* and *ic* terminations, etc., prove inadequate, resort may be had to numeral designations, which appear especially admissible in cases where an oxide occurs which is intermediate between the *ous* and the *ic* stage, and at the same time can not be classed as a compound of oxides already classified and named; but, in applying numerical designations, it is important to select only such as are free from hypothesis and afford correct information. In this respect chemists appear not to have been sufficiently careful of late years. In employing numerical designations to indicate molecular composition in cases where this is established, it is important to express the number of atoms of each constituent element, as *dicarbon hexachloride*, C_2Cl_6. But in the case of solid and liquid bodies of which the molecular weight is unknown, or which may vary with temperature, the name should merely indicate the relative proportions in which the constituents are associated; or, more explicitly, the name should indicate the proportion of the radical associated with what may be termed the characteristic element of the compound. No difficulty occurs in the case of the chlorides or analogous compounds of the monad elements generally, which may be termed mono-, di-, tri-, tetra-, penta-, or hexa-chloride, etc., according as combination is in the proportion of 1, 2, 3, 4, 5, or 6 atoms of chlorine to one atom of the characteristic element. The application of this system would involve the use of the names tin dichloride and iron trichloride (not sesquichloride) for stannous and ferric chlorides respectively, names which accurately express the relative proportions of metal and of chlorine in those compounds, without any hypothesis as to their molecular composition. It will, however, involve a slight departure from the existing practice when applied to oxides, sulphides, and other compounds of polyad elements; thus oxides of the type $(R_2)''O$ would be termed *hemi*-oxides, since they consist of the characteristic element and oxygen in the proportion of one atom of the former to half an atom of the latter. Oxides of the type $(R_2)^{vi}O_3$ would be termed *sesqui*-oxides, since the characteristic element and oxygen are present in the proportion of one of the former to one and a half of the latter; oxides of the type R_2O_5 would be termed *sesterti*-oxides as they contain oxygen and the characteristic element in the proportion of two and one half atoms to one of the latter; oxides of the types RO, RO_2, RO_3, and RO_4, would be termed respectively *mono-*, *di-*, *tri-*, and *tetr*-oxides.

The subject of nomenclature was also considered, particularly with reference to organic compounds, in a paper by Prof. Odling. The author held that, notwithstanding many recognized advantages, structural names are unsuitable for general use, more especially as applied to fundamental hydrocarbons, alcohols, and acids—by reason of their length, complexity, and want of ready indicativeness; by the circumstance of their being based on conceptions of chemical constitution of a kind pointed out by experience as eminently liable to change; and by the further circumstance of their representing a one-sided and, so far, an untruthful notion of the bodies designated. Structural names, expressing other than a distorted view of the constitution of all but a few of the most simple of organic bodies, are impracticable by reason of their length and complexity. Hence, to avoid the distortion inseparable from the use of any single structural name for an organic body, the only expedient is the assignment to each body, in proportion to its complexity, of an indefinite number of structural names—a proceeding almost tantamount to not assigning it any particular name at all. With a view to the prompt mental association of object with name, brief empiric names, based on the origin and properties of bodies, are, wherever practicable, to be preferred to structural names.

Chemical Physics.—Berthelot and Vieille have experimented to obtain the specific heat of gases at high temperatures. Their experimental data were obtained by the combustion of cyanogen mixed with sufficient oxygen to convert it into carbon monoxide and nitrogen, two gases which have sensibly the same specific heat. From the pressure developed in the explosion, the temperature referred to the air-thermometer was calculated; and, from the total quantity of heat produced and the temperature, the specific heat (at constant volume) of the resulting gaseous mixture was derived, and hence the specific heat of either of the resulting gases. The results of the experiments showed that the specific heat increases rapidly with the temperature at such a rate that, in passing from 0° C. to 4,500° C., the mean specific heat of the elementary and simple gases nearly doubles. There is, however, another group of elementary and of compound gases to be considered. Regnault showed that the specific heats of chlorine, bromine, and iodine were higher than that of the other elements; and this specific heat is closely the same as that of the compound gases which are formed with a contraction of one third in volume, as water, nitrogen monoxide, and carbon dioxide. The mean specific heat of chlorine at constant volume was found to be, at 1,800°, nearly three times that of hydrogen. Further experiments showed that, the mean specific heat of water-vapor between 130° C. and 230° C. being 6·65 at constant volume, it is more than doubled at 2,000° and tripled at 4,000°. On comparing the elementary specific heat of the vapor of water with that of its constituent elements, it appears that the former value is in excess of the latter at 2,000° C. by 7, and at 4,000° C. by 5·1. This excess represents a double work, that of the molecular disaggregation of the compound gas, and that of its chemical dissociation. Of carbon dioxide, the mean specific heat was found to more than triple, and the elementary specific heat to quadruple between 0° C. and 4,300° C.

Schramm has studied the influence of light on the reactions of certain bromine compounds. If the solution of bromtoluene in chloroform is feebly colored with bromine and then placed in the dark, no action takes place. But light decolorizes it at once, with evolution of hydrogen bromide. The action of light upon the bromination of ethylbenzine is of particular interest, because not only is this hydrocarbon under these conditions highly sensitive to the action of light, but it yields different substitution products according to the intensity of the light acting. If ethylbenzine is slightly colored with bromine, no decolorization takes place in the dark; but it loses its color at once in daylight, or when exposed to burning magnesium. If a molecule of bromine be made to act on a molecule of ethylbenzine in diffused light, a colorless liquid product is obtained which does not solidify at −20°. On distillation, HBr is evolved, and a distillate is obtained at between 140° and 190°, a dark-brown residue remaining in the retort. No bromine product of constant boiling-point could be isolated. When the ethylbenzine is treated with a molecule of bromine in direct sunlight the reaction is violent, and the final product is α-phenylbromethyl; if in full sunlight, phenyl-bromacetene; if in diffused daylight, dibromstyrene.

It has been noticed that mixtures of salts may often have a fusing-point lower than that of either of the constituent salts; and a like property having been observed in certain metallic alloys, Dr. Guthrie, who has been making the phenomenon a subject of special researches, has given it the name of Eutexia, and designates a substance exhibiting such a property as a eutectic mixture or alloy. A eutectic substance may be defined as a body composed of two or more constituents, present in such a proportion to one another as to give to the resultant compound body a lower temperature of liquefaction than that given by any other proportion. This temperature of liquefaction must, therefore, be lower than that of any of the constituents of the compound; and it is plain that those substances only can be eutectic which we can obtain both as liquid and solid. When a dilute aqueous saline solution is cooled below the freezing-point of water, a point will be reached, if the cooling is continued, where ice will be formed. If the ice is removed, and pressed or carefully drained, it will be found to consist of nearly pure water, the liquid which has drained away being a strong saline solution, which had become mechanically entangled among the crystals of ice during solidification. As the brine which remains is further cooled, ice will continue to form till a point is reached at which the temperature refuses to fall until the whole of the remaining mother-liquid has solidified. The solid result of this process, called a cryohydrate, possesses physical properties different from those of either the ice or the salt from which it is formed. If the solution is saturated when we begin to cool it, a deposit of surplus salt takes place till the mother-liquor has reached a condition of normal density; but the temperature of the formation of the cryohydrate is the same as in the former case. This temperature is identical with the lowest temperature that can be produced on employing a mixture of ice and the salt as a freezing mixture. The process is an example of eutexia. Eutectic salt alloys, or fused mixtures of salts, closely resemble cryohydrates in behavior. If they are present in any other proportion than the eutectic, the thermometer, on cooling them, will fall steadily till that salt which is in excess of the proportion required for a eutectic mixture begins to separate. When this is removed, and the process is continued, the whole will be found to solidify at a point which is fixed.

Raoult has studied the effect produced upon the point of solidification of a solvent by dissolving solid, liquid, or gaseous substances in it, and has reached the following conclusions: That all bodies, whether solid, liquid, or gaseous, when dissolved in a definite compound liquid capable of solidifying, lower the point of congelation; that there is for each solvent a maximum molecular depression (or depression corresponding to the solution of one molecule of the dissolved substance in one hundred grammes of the solvent) of the freezing-point; and that with all solvents the molecular depression of the freezing-point, due to the different substances dissolved, approximates to two mean values, differing with the character of the solvent, one of which is double the other. A number of special experiments in the application of the last principle seemed to justify the generalization that, for a constant weight of a given solvent, all physical molecules of whatever nature produce the same depression of the freezing-point. When the bodies dissolved are completely disaggregated, as for example when they are in a state of vapor, so that each physical molecule contains only a single chemical molecule, the molecular depression is at a maximum, and is the same for all bodies. When the chemical molecules are united in pairs to form the physical molecule, the depression has only one half its former value, since the double molecule produces no more effect than the single one. If the maximum molecular depression be divided by the molecular weight of the solvent, the quotient expresses the depression produced when one molecule of the substance is dissolved in one hundred molecules of the solvent. In subsequent papers, Raoult considers the application of this law to the study of the distribution of acids and bases in solution, and of the freezing-point of acid and alkaline solutions.

Dr. W. W. J. Nicol, of the Committee on Solution, of the British Association, reports: 1. That the results of a series of experiments show the molecular volume of a salt in dilute solution to be a quantity composed of two constants; one for the metal and the other for the salt radical. Hence the same volume change is produced by replacement of one metal or salt radical by another metal or salt radical. Water of crystallization is not to be distinguished from the solvent water, but the water of constitution possesses a volume different from that of the rest of the water. These results show the existence in solution of the anhydrous salt in contradistinction to the view that a hydrate, definite or indefinite, is formed in solution. 2. Saturation is reached when the further addition of salt would produce diminution of the mean molecular volume of the molecules already present. 3. The so-called supersaturated solutions are simply saturated or non-saturated solutions of the anhydrous salts, the only truly supersaturated solutions being those resulting from the fact that, when a hot solution is cooled, a finite time is required for the excess of salt to crystallize out.

M. L. Cailletet approves of liquid ethylene as affording the best agency for effecting the liquefaction of oxygen. When boiling in the free air it gives a degree of cold such that oxygen if compressed and cooled to the same temperature presents, on diminishing the pressure, a tumultuous ebullition which lasts for an appreciable time. On quickening the evaporation by means of the pneumatic machine, the temperature is lowered so far as to bring the oxygen to a liquid state. The author had tried to obviate the necessity of working with ethylene in a vacuum by using liquid formene, but he found that ethylene was so easy to prepare and manage as to be on the whole preferable. He then sought a method for obtaining, by means of ethylene boiling in open vessels, a reduction of temperature sufficient for the complete liquefaction of oxygen. For this purpose he now employs a simple process consisting of intensifying the evaporation of the ethylene by forcing into it a current of air, or of hydrogen cooled to an exceedingly low temperature. Under these circumstances the temperature may be reduced to quite below the critical point of oxygen, and the gas most distinctly liquefied.

Prof. Dewar, in reporting on his experiments with liquefied oxygen, states that at —130° liquid oxygen loses the active characters possessed by the element in the gaseous state. It is without action on phosphorus, sodium, potassium, solid sulphureted hydrogen, and solid hydriodic acid. Other substances appear to undergo similar changes at very low temperatures. Thus liquid ethylene and solid bromine may be brought in contact without any action taking place, whereas gaseous ethylene and liquid bromine unite directly at the ordinary temperatures. Hautefeuille and Chapuis, by subjecting a mixture of carbonic anhydride and ozone to great pressure, obtained a blue liquid, the color of which is due to the ozone. If ozonized air be passed into carbon disulphide at —100°, the liquid assumes a blue color, which disappears if the temperature be allowed to rise, and at a certain point a decomposition, resulting in the production of sulphur, takes place. The best solvent for ozone is a mixture of silicon tetrafluoride and Russian petroleum. These solutions of ozone are without action on metallic mercury or silver.

New Substances.—The panclastites is the name of a new class of explosives to which M. Eugène Turpin has directed attention, and with which he has been experimenting since 1878. They are formed by the association of peroxide of nitrogen or hyponitric acid (NO_4) with some combustible base, and have properties varying with the character of the base. They explode with more force than either gun-cotton or nitro-glycerine, but at the same time require a much stronger shock to produce the explosion; so that they are safer to handle than even gunpowder. Some of the compounds are uninflammable, while the others, more or less inflammable, will not explode by fire alone in an open vessel, but burn quietly; some of them with so bright a flame that M. Turpin has thought of using them in luminous telegraphy.

A new explosive powder has been prepared by Mr. J. D. Dougall, of St. James, England, which is claimed to be superior for general use in guns and artillery to any other. There are claimed for it all the attributes of what "Iron" styles the ideal powder, which briefly stated are: capability of retaining its granular or other form during much journeying either by land or by sea; uniformity in its rate of combustion and in the development of its energy; lively action, but not too much, on the gun when discharged; not corroding or injuriously affecting the inner surface of the gun-barrel; leaving a minimum of residue; power of resisting damp. The ingredients may be fairly assumed to be much the same as those employed in the Schultze powder, the basis of which is finely comminuted wood treated with an oxygenizing agent, but with additions, the character of which is at present kept secret. This powder has been successfully deflagrated, after having been immersed in water several days, and dried.. It is made of various qualities, suitable for sporting guns and military rifles, for field artillery, for charging shells, and for mining purposes.

Mr. M. Carey Lea has observed in silver chloride, bromide, and iodide, the property of entering into chemical combination with many coloring-matters much in the same way that alumina does, though not to the same extent, and of forming what may be called lakes. It is only necessary to bring freshly precipitated and still moist silver salt into contact with coloring-matter, or to make the precipitation in the presence of the coloring-matter if the latter is not precipitated by silver nitrate, when the combination takes place and the coloring-matter can not be washed out. Not all coloring-matters are capable of uniting with the silver salts, but the number of those that do so unite is considerable. The color assumed by the silver salt is not always that of the dye, but may differ from it considerably. Also the three silver salts may be differently colored by one and the same coloring-matter. But more frequently coloring-matters impart their own shade or something approaching to it. Different specimens of the same color also gave sometimes quite different results.

Nilson has succeeded in preparing pure metallic thorium and in determining its properties. The metal was obtained from potassium-thorium-chloride by reducing it, at a moderate red heat, in a tube of wrought-iron, with dry sodium chloride. The reduction was completed in fifteen minutes, after which the contents of the tube, having been allowed to cool, were treated with water, which left the reduced thorium undissolved. It appeared as a shining gray powder which under the microscope was seen to consist of small, thin six-sided plates, the larger ones of which had the luster of nickel or silver and were, in some cases, aggregated together. The crystals are brittle, and in an agate mortar give a silver streak. The metal is permanent in the air up to 100° or 102°. Heated above that temperature, it ignites even below redness, giving a brilliant light and forming a snow-white oxide. Its attraction for oxygen is very great, and it is therefore extremely difficult of fusion. It burns when heated in chlorine, bromine, and iodine, but sulphur does not attack it at its boiling-point; and it does not decompose water at any temperature. Its specific gravity is calculated at 10·9178.

W. E. Hidden has identified a new mineral which is found with salt, thenardite, tincal, etc., at the works of the San Bernardino Borax Company, in San Bernardino County, Cal. It is an anhydrous sulphato-carbonate of sodium, and crystallizes in hexagonal crystals, transparent to semi-opaque, with a white waxy color inclining to yellow. Sometimes the crystals are confusedly grouped as from a common center, much like a certain variety of aragonite. The density of the new mineral is 2·562, and its hardness 3⅗. It is readily soluble in water and effervesces with acids. Mr. Hidden names it Hanksite, after Prof. Henry G. Hanks, of California, in whose collection it first attracted notice.

Robert Sachsse isolates three coloring-matters from chlorophyl, which differ from one another in composition and in the degree of their solubility in alcohol. The one which is nearly insoluble in alcohol he calls α-phæochlorophyl; that which is sparingly soluble, β-phæochlorophyl; and the third, which is easily soluble in alcohol, γ phæochlorophyl. β-phæochlorophyl, when dry, appears nearly black. It is insoluble in water, but soluble in hot alcohol; from which it separates on cooling, in the shape of an amorphous precipitate. The formula of its composition is $C_{27}H_{33}N_3O_4$.

Sorabjé has, by means of Wurtz's reaction of treating the iodide of a radical with sodium, prepared some of the higher members of the paraffine series hitherto unknown. By adding finely divided sodium to cetyl iodide dissolved in six times its weight of ether, he obtained glistening crystals of dicetyl, which after recrystallization fused at 70° and distilled without decomposition at a much higher temperature. From heptyl iodide, treated in the same way, was obtained diheptyl, a colorless mobile oil, boiling at 245°, and solidifying at 6°. From a mixture of ethyl and cetyl iodides was obtained ethyl-cetyl, as a colorless oil boiling at about 312°. Cetane was prepared by reducing the iodide by concentrated iodine solution in presence of phosphorus, and by digesting the iodide with zinc and hydrogen chloride. It is an oil which boils at 278°, and solidifies at from 18° to 20°.

Mr. J. T. Brierley described, at the British Association, a series of new vanadium compounds—of which he defined the sodium, potassium, and ammonium salts—as being well-defined crystalline salts of a purple or dark-green color, possessing a metallic luster, and containing both the oxides V_2O_4 and V_2O_5, and which may be regarded as vanadate vanadites. These salts are formed by adding hypovanadic sulphate to a solution of an alkaline metavanadate.

Munz and Marcano have described a new sugar obtained from the seeds of the *Laurus Persea*, from which it is extracted by boiling alcohol and cooled, when it crystallizes. Its composition is represented by the formula $C_{12}H_{14}O_{12}$, and it is isomeric with mannite. A mixture of strong nitric and sulphuric acids with it gives a trinitro-perseite which detonates violently by a blow and spontaneously decomposes.

New Processes.—Morton Liebschutz has described a process of saponification which may be applied with advantage to the examination of butter and the detection of oleomargarine. After the glycerine has been extracted, dried, and the constant weight noted, it is heated and burned. The weight of the ash is deducted from the total weight. The difference is pure glycerine. The percentage of ash compared with the percentage of glycerine is of itself an important factor, as glycerine derived by this mode of treatment from pure butter gives 5 per cent. of ash, whereas the glycerine of oleomargarine and other similar fats leaves only from 0·3 to 0·6 per cent. By this method the author has found, after deduction of the ash, 3·75 per cent. of glycerine in pure butter, and 7 per cent. in oleomargarine.

Prof. Engel, of Montpellier, France, has devised a new process for the manufacture of carbonate of potash, which is based on the discovery that if one takes a solution of potassium chloride holding in suspension either magnesia or magnesium carbonate, and treats it by carbon dioxide, with constant agitation, he will obtain a solution of magnesium chloride holding in suspension a double carbonate of magnesium and potassium. This double carbonate is a crystalline powder, capable of being separated from its mother-liquor readily and completely by any of the ordinary methods of filtration. While quite insoluble in solution of magnesium chloride, and not at all attacked thereby in the cold, it is decomposed by pure water.

A new process for the purification of sewage has been tried at Buxton, England, with much success. It consists in applying as a precipitant a mineral water derived from the lower coal-formations near the town. This water contains a small proportion of ferrous carbonate held in solution by carbonic acid. On exposure to the air the carbonic acid escapes, and the iron, taking up more oxygen, subsides in the state of ferric hydroxide in combination with a considerable part of the organic impurities, suspended and dissolved. By this method of treatment the amount of free ammonia in the sewage is reduced from 11·74 to 4 parts per million, and the albuminoid ammonia from 1·60 to 0·30. The only unsatisfactory point noticed in the report of the results is that the effluent is stated to be "distinctly alkaline."

Berthelot and Vieille have adopted an improved method for determining the heat of combustion of carbon and other organic compounds, in which the difficulties arising from the length of time required and from the incompleteness of the oxidation are obviated. They effect the combustion in oxygen compressed to about seven atmospheres, in a calorimetric bomb, using a weight of combustible such that the oxygen consumed by it does not exceed from 30 to 40 per cent. of the whole quantity. The operation does not require more than three or four minutes, and is applicable to all substances whose vapor tension at the ordinary temperature is inconsiderable.

L'Hote recommends, for the purification of arseniferous zinc, the projection into the melted metal of 1½ per cent. of anhydrous magnesium chloride. On stirring, white fumes of zinc chloride, mixed with arsenious chloride, are evolved. If now the metal be poured into water to granulate it, the zinc obtained is free from arsenic. The same process will free zinc from antimony.

Ville and Engel have proposed two new indicators for alkalimetry, which, not being affected by carbonates, are available for the volumetric determination of the free bases in the presence of alkali carbonates. One of them is sulphindigotic acid, which is prepared by neutralizing with calcium carbonate the solution of indigo in fuming sulphuric acid. It is turned yellow by caustic alkalies, while upon being neutralized its color changes back to blue, passing through an intermediate green. The other substance is the soluble blue C. 4 B. of Poirier, the solution of which is even more sensitive than the sulphindigotic acid. It becomes red under the influence of the free bases.

Atomic Weights.—Prof. T. S. Humpidge has computed the atomic weight of glucinum from determinations of its specific heat, and fixes it at 9·1, or at the figure required by the periodic law. This conclusion was confirmed by the author's determinations of the vapor-densities of glucinum chloride and bromide. The determination places glucinum in the same class as carbon, boron, and silicon. It also affords a striking argument in favor of the value of deductions drawn from the periodic law in regard to the atomic weight of an element, and shows that such deductions will in future form one of the most important factors in fixing a doubtful atomic weight.

Halberstadt has determined the atomic weight of platinum after Seubert's experiments from the double chlorides of potassium and of ammonium respectively, and also from the corresponding bromides and platinum tetrabromide. Two methods of analysis were employed, in one of which the platinum was determined by igniting the compound in a current of hydrogen; in the other by electric precipitation. Ninety-seven determinations were made—59 by ignition, and 38 by electrolysis—the mean result of all of which was 197·57592.

Thorpe has determined the atomic weight of titanium, in one series of experiments from the tetrachloride, and in a second series from the tetrabromide. The reagent used was water or silver. The mean result gave 48, which corresponds with the number in Mendelejeff's table, as the most probable atomic weight.

Analytical Chemistry. — For both the qualitative and quantitative determination of silver in lead-ores, Jean Krutwig decomposes from twenty to twenty-five grammes of the lead-ore in an iron crucible with borax, soda, and cream of tartar. The lead thus obtained, which contains, besides iron and sulphur, all of the silver, is dissolved in concentrated nitric acid, water is added, and the lead sulphate is filtered off. The filtrate is then treated with an excess of caustic soda and allowed to stand for some time, after which the brownish-yellow precipitate, containing iron, lead, and silver, is filtered. This precipitate, which consists of lead and iron hydroxide and a so-called plumbite of silver, is then treated on the filter with a somewhat concentrated solution of ammonia, which dissolves the plumbite of silver. The ammonia is expelled from the filtrate by evaporating on the water-bath, and the residue is dissolved in nitric acid. The silver is then detected, either by treating with caustic soda solution, and thus obtaining the characteristic precipitate of silver plumbite; or by precipitating the lead as sulphite, filtering, and treating the filtrate with hydrochloric acid.

H. Reinsch has called attention to the use of the microscope as affording an important means of qualitative chemical analysis. It requires, however, great skill in manipulation, for the effects are liable to vary according to the degree of concentration of the solutions used. Silica yields the most varied and beautiful forms, resembling plants and ferns, and often presents, in the most glowing colors, fine-leaved flower forms in infinite varieties. The forms are obtained by adding to a drop of a 4 per cent. solution of potassium silicate on an object-slide a drop of 2 per cent. solution of sodium bicarbonate, and allowing the liquid to evaporate; if 1 per cent. of sodium bicarbonate is added instead of 2 per cent., the flower-forms are not obtained, but polarized spheres appear under the Nicol prism. The most minute traces of silica can be readily detected in a mineral by this means. Aluminum oxide, glucina, and boric acid, are also easily detected. The alkalies possess optic properties, by which they can be definitely and certainly distinguished with the microscope. Their sulphates are most suitable for examination. Ammonium sulphate assumes peculiar shapes that can not be confounded with those of any other salt. Lithium sulphate forms clusters of prismatic needles that exhibit striking polarization effects. Barium assumes mossy, glistening, colorless dendritic forms, while strontium nitrate takes the form of radiating needles, with colors changing under the polarizer. Magnesia may be detected by its colorless clusters of needles, even when present in the most minute quantities. Cadmium assumes more characteristic, and uranium more beautiful forms, than any others of the metals. The cadmium sulphate produces large spheres containing ellipsoids, which radiate from the center, and are marked by regular transverse depressions, and which present most brilliant and remarkable effects under the Nicol prism. The formation assumed by the uranium sulphate, which can readily be recognized by the pocket lens, resemble beautifully colored asters, or corn-flowers. Less frequently, the salt appears in the form of envelopes with velvet-blue narrow and purple-colored broad triangles, which also may be recognized without the Nicol prism. Other characteristic forms have been described for lime, potassium, copper, manganese, iron, mercury, and silver sulphates.

The fatty oils differ so little from one another physically that their examination is difficult. MM. Doumet and Thibaut indicate a method of spectrum analysis for which the oils are divided according to their absorption-spectra into four groups: (1) those which have the spectrum of chlorophyl, among which are included olive, hemp, and nut oils; (2) those which transmit all rays equally, and have consequently no spectrum—of these are castor oil, and the expressed oils of sweet and bitter almonds; (3) oils which absorb all the "chemical" or more refrangible rays, and have a characteristic spectrum. In this group we find rape, colza, mustard, and linseed oils. In the fourth group the absorption extends in bands over the more refrangible part of the spectrum, but is not complete. In it are the oils of sesame, earth-nuts, and poppy-seed.

The processes heretofore in use for the separation of resin from the fats and the quantitative estimation of the substance are defective, because the solvents for oleic acid and its salts and for the resins are to a considerable extent the same. Mr. Thomas S. Gladding has adopted with success a process depending upon precipitation with silver, the fatty salts of which are almost perfectly insoluble in ether, while the resinate is readily and abundantly soluble in it.

J. Kjeldahl offers a new method for determining nitrogen in organic compounds which depends upon the fact that when a nitrogenous substance is heated with strong sulphuric acid and then oxidized with permanganate of potassium, the whole of the nitrogen is converted into the sulphate of ammonium. It is applicable to all nitrogenous compounds except those containing the nitrogen in an oxidized condition, or in the form of cyanogen. It is simple, accurate, and expeditious, and is said to have given excellent results in all cases in which it has been tried by the author and by various other experimenters.

The determination of nitrogen in nitro- and azo-compounds is effected by the addition of some reducing material to the soda-lime, by which the nitrogen is yielded as ammonia. The existing methods—Tamm-Guyard's with sodium acetate, Ruffler's with sodium thiosulphate, and Goldberg's with stannous sulphide and sulphur—being somewhat unsatisfactory as general methods, Arnold, after experimenting with various substances, has used sodium formate with sodium thiosulphate and soda-lime with excellent results.

A. Grandval and H. Lajoux describe a new process for the detection and rapid determination of small quantities of nitric acid in air, water, and soils. It depends on the transformation of phenol into picric acid, and on the intensity of the coloration of ammonium picrate. To determine a nitrate in solution it is converted into ammonium picrate, and the tint obtained is compared with that of a standard solution by means of a Dubosq colorimeter. By this process the quantity of nitric acid contained in a liquid may be determined with certainty to the fifth decimal; and the process is applicable to very minute quantities.

Cleve separates the new earth Samaria by fractionally precipitating the mixed nitrates by a dilute solution of ammonia. Samaria concentrates in the first fractions, from which didymium is separated by repeated precipitations, yttria by precipitation with potassium sulphate, and terbia by repeated precipitations with ammonia. The final fractions are nearly white. The atomic weight, as determined from the weight of the sulphate yielded by a known weight of the oxide, is 150. Thalèn has mapped 198 lines in the spectrum. The metal samarium has not yet been isolated.

Charles Tennant Lee, of Boston, employs for the determination of indigo-blue, or indigotin, in indigo, a method by sublimation, which has been uniformly satisfactory. The operation is best effected in a shallow platinum tray, in which dried and pulverized indigo is evenly and thinly spread, and heat applied through an iron plate. When the surface of the indigo is covered with a shining layer of crystals, a flat arch of Russia iron is turned over the tray. The purple vapors of indigotin which are now given off condense on the under surface of the arch. When all the crystals of indigotin have disappeared from the powdered substance, its loss in weight gives the amount of indigotin the specimen contained.

S. L. Penfield, having observed cæsium and other alkalies in a specimen of beryl from Norway, Maine, analyzed a number of beryls from different places in Maine, Massachusetts, Virginia, and Siberia, to find to what extent beryllium was replaced in them by alkalies. The result was the discovery that, so far as tested, beryls always contain alkalies, although sometimes only in small quantities. Sodium and lithium were always present, and cæsium occasionally, while potassium and rubidium were never detected.

The director of the Connecticut Agricultural Experiment Station has reported favorably of the results of using simple calcium hydroxide (slacked lime) instead of the mixture of sodium hydroxide and calcium hydroxide, or oxide proposed by Will and Varrentrapp, as a reagent for converting organic nitrogen into ammonia for the purposes of analysis.

Synthetic Chemistry.—The efforts which have been prosecuted during much of the present century to obtain by artificial means the minerals occurring in nature have been attended by marked success, especially in France, where well-nigh all the known mineral species have been reproduced by methods often of the most diverse character. MM. F. Fouqué and A. Michel-Levy have been working in this field since 1878, and have not only reproduced the minerals as individual species, but have also sought to combine them in their natural associations, and thus to imitate in the laboratory the processes of nature in the formation of the earth's crust. These authors state as the five conditions which an artificial mineral product must fulfill in order to be a successful synthesis, that (1) it must be identical in its chemical composition with the natural mineral imitated; (2) the two must also be crystallographically identical; (3) their internal structure—i. e., cleavage, inclusions, etc.—must be the same; (4) the artificial minerals must follow the same laws of association as the natural ones; (5) the conditions of the artificial operation must be compatible with the circumstances under which the natural products were formed. The crystalline constituents of the earth's crust are arranged, for purposes of the synthetic studies, in four categories: 1. The minerals of volcanic rocks—i. e., basic rocks; (2) the minerals of acidic rocks, i.e., quartz and orthoclase rocks; (3) the minerals of the crystalline series, gneiss and mica-schist, for example; (4) mineral veins. The minerals and their associations of the first of the four categories have nearly all been artificially reproduced by simple fusion; those of the last by solution or volatilization. Those of the two remaining categories have not yet been artificially reproduced.

Horbaczewski has synthetically produced uric acid by heating a mixture of glycocoll with ten times its weight of urea to a temperature of from 200° to 230°. After separation from the resultant yellow, turbid, and pasty liquid, and purification, a yellowish crystalline powder was obtained, which possessed all the properties of uric acid.

Notwithstanding the apparent success that has attended many experiments in artificial synthesis of organic compounds, it appears to be still an open question whether the natural substances are actually duplicated. Several of the vegetable acids have the power of turning the plane of polarized light either to the right or left. Some similar substances have been prepared artificially, and the products thus obtained have been shown to have all the properties of the corresponding natural substances, with the exception of the optical activity. The conclusion has been drawn that artificially prepared substances can not act upon polarized light, and that in order to get an optically active substance we must have the intervention of the life-process. Recently, however, Perkin and Dupra succeeded in making racemic acid from bibrom-succinic acid, and Jungfleisch and Pasteur showed that this artificially prepared racemic acid could be split up into dextro- and lævo-tartaric acids. Thus the artificial preparation of one optically active substance was certainly accomplished, and some chemists believed that the rule hitherto found prevailing was broken. Pasteur reviewed the question before the Paris Chemical Society in December, 1883, and reiterated his principle of the existence of a fundamental difference between vital and lifeless substances, which was defined by their asymmetry or symmetry in optical function, and of the impossibility of producing an asymmetrical substance without the intervention of life; and he denied that it was disturbed by Perkin and Dupra's synthesis of racemic acid. On the contrary, he claimed that the distinction was confirmed by his own experiments and those which M. Jungfleisch and M. Le Bel, who contradicted him, had performed with it.

Anschütz and Eltzbacker, experimenting on the action of aluminum chloride upon tetrabromide acetylene dissolved in benzine, obtained a hydrocarbon, hardly soluble in the ordinary solvents, which, instead of the substance expected, proved to be anthracene. The synthesis affords the first experimental evidence for the assumption generally made that the middle carbon elements in anthracene are directly united.

Agricultural Chemistry. — The Association of Official Agricultural Chemists publishes the processes it has adopted for the determination of phosphoric acid in fertilizers. The water-soluble phosphoric acid is first separated by washing out with water, and determined. The citrate-insoluble phosphoric acid is then separated, after washing the residue of the treatment with water with strictly neutral ammonium-citrate solution, filtering, and treating the filter and its contents with fuming hydrochloric acid. The total phosphoric acid is then determined by successive treatments of the substance with solution of magnesium nitrate, fuming hydrochloric acid, ammonium nitrate, and molybdic solution, and magnesia mixture. The sum of the water-soluble and citrate-insoluble subtracted from the total gives the citrate-soluble.

R. Warrington regards the experiments made at Rothamsted during the last few years as almost decisive of the theory that nitrification is produced by an organism. The process may be started at will in any suitable solution by the addition of a nitrified material, while without this the solutions would remain sterile for years. Phosphoric acid is essential to the continuance of the process, as it is to the existence of life. The nitrifying organisms are found to exist in the soil mainly within nine inches, rarely to extend below eighteen inches, and never, so far as the experiments show, below three feet from the surface. The rate at which nitrification proceeds depends also on the vigor of the organism. Organic carbon is necessary only as it is required for the nourishment of the organism, and excess is rather prejudicial. Urine contains sufficient organic carbon for its own nitrification; but, since nitrification is limited by excessive alkalinity of the medium, strong urine is unfit for it. This fact has an important bearing on the use of liquid manures. Experiments reported by E. Duclaux also indicate that plants are incapable, without the aid of microbes, of utilizing the organic matters in the soil.

Prof. F. H. Storer has described experiments that he made to ascertain the importance of the nitrogen constituents of the soil to plants growing in it. He prepared four sets of five jars each, and filled them variously with garden-soil from which the organic matter had been removed by calcination, Berkshire sand, and vegetable loam from five different fields. The jars were graduated, assayed, and marked, so as to distinguish between the qualities of the soils contained in them severally, and three grains of buckwheat were planted in each. The resultant crops were harvested on the same day, and examined and measured under precisely the same conditions. The size and vigor of the plants were found to be almost exactly in proportion to the amount of vegetable mold that had been placed in the jars. Other experiments showed that mixtures of calcined loam and sand were capable of bearing abundant crops when supplied with nitrogenized fertilizers, such as the nitrates of potash and lime. The result of the experiments as a whole induced the conclusion that the nitrogen of the soil is of very great value as plant-food under the ordinary conditions of warmth and moisture that are proper for the growth of agricultural plants; but it was not such as to encourage the idea of instituting a test or assay of the nitrogen value of any given soil. That is dependent on other conditions than chemical composition, among which may be those that are favorable or unfavorable to the development of the organism on which nitrification depends. In the experiments made with reference to this point, the jars were variously watered with rain-water and solutions of sulphate of potash, phosphate of potash, sulphate of lime, chloride of potassium, nitrate of lime, and nitrate of ammonia. The results of the experiments showed that, while a method of assay of this kind could readily distinguish a true garden-soil from a mediocre loam, it was incapable of exhibiting any definite practical distinction between ordinary loams.

A. B. Griffiths has drawn the conclusion from repeated experiments that ferrous sulphate is good plant-food when sparingly applied. A solution containing as much as one fifth per cent. of it is, however, fatal to most plants. A fairly large proportion of soluble iron in the soil is favorable to the growth of plants developing a large amount of chlorophyl. Iron is regarded by the author as closely related to the production of chlorophyl, and the increased production of soluble carbo-hydrates, woody fiber, and fat in certain cases, is a direct consequence of the increase in chlorophyl. Nitrogen is also increased by the use of ferrous sulphate, and the salt acts as an antiseptic agent in the soil to prevent parasitic diseases of the plant.

Industrial Chemistry.—The oils most in demand and highest in price are exceedingly liable to adulteration with inferior or cheaper oils; but, unfortunately, in the absence of any characteristic test for each oil, such as we have for each metal, the determination of the adulterant is extremely difficult if not quite out of the question. When, however, we examine an oil supposed to be adulterated, much can be accomplished, says Mr. Oscar C. S. Carter, in a paper on the subject, by procuring a sample of perfectly pure oil and subjecting both to the same tests and observing their behavior. According to Prof. Bichi, of Florence, cotton-seed oil can be certainly detected in olive-oil by the test of a one-per-cent. solution of nitrate of silver in absolute alcohol. If there be cotton-seed oil present, even in the most minute quantity, the mixture will begin to darken to a tint depending on the amount of the adulterant present. Mr. Carter, applying the same test to lard-oil, found that a specimen known to be pure was not affected at all; while a specimen of the ordinary commercial oil began to darken when it had been heated for a few minutes, and finally became quite black. The elaidin test is sometimes very satisfactory, especially in detecting a mixture of a drying and non-drying oil, and in detecting adulteration of olive-oil. This test depends upon the fact that olein and oleic acid in contact with peroxide of nitrogen yield a crystalline, solid, fatty body soluble at 32° C., to which Boudet has given the name elaidin. The nitrous vapors made by the action of nitric acid on copper are passed through the oil, or it may be shaken with a fresh solution of mercurous nitrate, which has the property of retaining nitrous acid. Non-drying vegetable oils and most animal fats contain oleic acid. The following oils contain a high percentage of olein: Olive, almond, rape, arachis (earth-nut), castor, and the oils from lard and tallow. These oils form with nitrogen peroxide solid elaidin of a white or yellow color, which in some cases is firm and resonant. The drying oils, such as linseed, hempseed, and poppy-seed oils, do not form solid elaidin with nitrous vapors, but remain liquid for more than two days and become slightly colored. The elaidin test was applied to the lard-oils. The elaidin produced by the pure oil was more firm and coherent than that of the adulterated oil, and was of a lighter color, and the nitrous fumes rose more rapidly through the pure oil. The adulteration of the oil was also shown by the fact that it could not be completely saponified with caustic soda, while such saponification is one of the characteristics of pure lard-oil. Pure lard-oil gives with nitric acid a yellow color, approaching orange, while the adulterated sample with nitric acid of the same strength gave a distinct brown color on standing. That portion of the oil which resisted saponification with caustic soda gave a much darker, deep coffee-brown color. The determination of the specific gravity is the most important of the physical tests.

The history of the development of the coal-tar colors has been reviewed, and the colors themselves and the processes for producing them have been carefully described, by Dr. W. H. Perkin in a president's address to the Society of Chemical Industry, which is published in full in "Nature" of July 30 and August 6. At the close of his address, Dr. Perkin invites attention to the fact that the coal-tar industry, to which none other can be compared for its rapid progress, is the offspring of chemical research, and that in return it has in many cases given a fresh impulse to research by opening up new subjects of theoretical interest for consideration, and from the fruits thus resulting reaping further benefit. This linking together of industrial and theoretical chemistry has undoubtedly been the great cause of its wonderful development. We have now not only all the colors of the rainbow, but we have also the more somber but not less useful colors, and great varieties of products of similar colors possessing different properties which fit them for special uses. This industry is also one of no mean dimensions, and the value of its annual output is estimated by Dr. Perkin to be not less than £3,500,000.

W. French Smith has made investigations to ascertain the maximum and minimum percentages of alcohol and acetic acid which genuine apple-juice will produce. Eight specimens of cider made under the supervision of the author from his own selection of apples, from the best "August sweets" down to the poorest greenings, were examined. The best specimen gave 9·40 per cent. of alcohol; the poorest, 3 per cent. The average of all the determinations was 5 per cent., which may be taken as the proportion of alcohol a good cider should contain, while none should fall short of 4 per cent. The two lowest grades of the cider, containing respectively 3·85 per cent. and 3 per cent. of alcohol, could not be protected from putrefactive decomposition during the summer. The six grades of cider higher than these two yielded of acetic acid, the best 10·10 per cent., and the poorest 4·45 per cent. The average was 6·18 per cent. The actual amounts of acetic acid found were lower than the alcoholic percentages in the original ciders would demand. This is explained by imperfect acetification.

"Nickel-plating," says Mr. William H. Wahl, in a paper read before the Franklin Institute last year, "is an American industry, in the sense that it was first practiced on a commercial scale in the United States, and here received that practical demonstration of its usefulness that has since made it the most successful and most widely practiced branch of the art of electro-plating." Its growth has been favored by the success which Mr. Joseph Wharton has attained in the production of metallic nickel of suitable purity at a reasonable price. Mr. Wharton was one of the first to work the metal successfully, and exhibited at Vienna, in 1873, samples of axles and axle-bearings, and at Philadelphia, in 1876, a remarkable series of objects of wrought-nickel. He produced in his works, between 1876 and the close of 1882, 1,466,765 pounds of the metal, the principal source of supply of which was from the ores at Lancaster Gap, Pa. The earliest practical process for nickel-plating in the United States was patented by Isaac Adams, Jr., in 1869. He devised a bath of the double sulphate of nickel and ammonium and the double chloride of nickel and ammonium, with anodes of metallic nickel, in which iron was combined, to obviate the bad effects of copper and arsenic impurities. The extensive application of this process was facilitated by the production of nickel of improved qualities of purity, and the introduction of dynamos for producing the electric currents, they taking the place of the expensive galvanic battery. Edward Weston, in 1878, prepared a solution containing boric acid, with the double sulphate of nickel and ammonium, the superiority of which is generally recognized. The deposited metal is almost silver-white, dense, homogeneous, and tenacious, while the solution maintains a uniform, excellent working quality. Other things being equal, the slower the rate of deposition, the more adherent and tenacious the coating of deposited metal will be. Success in plating depends very largely upon the perfect cleansing of the articles before they are immersed in the bath; and this is more important in case of plating with nickel than with other metals, for which the solutions are generally more alkaline.

Mr. Jacob Baynes Thompson has devised an improved process for bleaching, in which the time usually required for that operation has been greatly shortened. The main feature in the process consists in the modes of chemicking and souring under which the two operations are performed simultaneously. Carbonic-acid gas is employed as the decomposing or souring agent, and a solution of triethylroseaniline and oxalic acid is employed to remove the faint natural yellow tinge of the cotton. In carrying out the Thompson process, the goods are first boiled in an alkaline solution and washed. They are then placed in an air-tight kiln connected on the one hand with a vessel containing the bleaching solution, and on the other hand with a gas-holder containing carbonic-acid gas. After the bleaching solution has remained long enough in the kiln to enable the material to be thoroughly soaked, about five minutes, the liquor is drawn off and the gas is let in, to remain in contact with the moistened material till it has decomposed the whole of the chloride of lime in the bleaching solution on the fiber of the cloth, or for about forty-five minutes. The bleaching-liquor is again run in, to be succeeded again by the carbonic acid, till the material is of sufficient whiteness. Then the material is thoroughly washed, after which it is slowly passed through the solution of triethylroseaniline, when the process is complete. The time required ranges from eight to twelve hours, according to the nature of the fabric under treatment.

Dr. L. Ehrlich has for the first time succeeded in isolating gallium by an industrial process. He followed the method of M. L. de Boisbaudran of extracting it from zinc-blende, with a few modifications. When operating on several hundred-weight of blende, he succeeded in simplifying the process so that it became possible, within two or three days after lixiviation of the zinc sulphates, to concentrate the gallium of six hundred-weight of blende in a relatively small quantity of a mud containing ferric oxide. On the electrolysis of the galliferous alkaline solution, the metal was deposited on the negative electrode in fine needles of from two to three millimetres in length. After washing the electrode with water and alcohol, the metal, when being dried near a flame, could be melted into small globules at a temperature of 30·5° C., or about 87° Fahr. The luster of gallium-globules is greater than that of mercury.

MM. Brin, of Passy, are producing oxygen on a large scale by the barium-oxide process and applying it to the purification of water. For this purpose filtered water is placed in a cylinder and saturated with oxygen gas at three hundred pounds pressure to the inch. All organic matter is destroyed, and the water is made perfectly pure.

Domestic Chemistry.—Dr. Percy F. Frankland records the results of experiments he has made with a view to discover whether and to what extent micro-organisms may be removed from water by submitting it to some of the various processes of treatment which are in vogue for its purification. The number of organisms present in the waters was determined, both before and after treatment, by the method of Koch. The organisms developed in diluted urine were made the objects of the experiments. Filtration through fresh greensand, highly ferruginous, completely sterilized the water. After thirteen days of continued action, the original power of the greensand was found to have broken down; but the filter was still arresting a considerable proportion of the organisms. With spongy iron, sterilization was complete, both at the beginning of the filtration and after twelve days of continuous action. With animal charcoal, perfect sterilization was effected at the beginning, and after twelve days of continuous filtration; but at the end of a month the filter delivered water more highly impregnated with organic life than that with which it was supplied. Brick-dust failed to wholly remove the organisms. Coke was found to possess filtering powers second only to those of spongy iron. At the outset the result was equally perfect with both, and even at the close of five weeks' continuous work the coke removed a large proportion of the micro-organisms present in the unfiltered water. The object of a second class of experiments was to ascertain whether the organisms might not be removed by agitation with the same substances used in the filters, and then allowing them to subside. An "exceedingly marked" reduction was obtained by shaking with spongy iron, and greatest when the agitation was continued for only a minute; with chalk, "a very large reduction." The efficiency of animal charcoal was "very markedly greater" than that of chalk. Simple agitation with coke for fifteen minutes was sufficient to remove all organisms. As in the agitation experiments the water for examination was always taken from the clear upper layers, Dr. Frankland tried experiments to ascertain whether the micro-organisms would not, by subsidence alone, separate from these layers without the influence of solid particles. The result showed that, so far from any tendency of this kind existing, the tendency was for a very rapid increase in the number of micro-organisms. From Clark's process of softening water by means of lime, results were obtained showing that in it we possess a means of greatly reducing the number of suspended organisms. Dr. Frankland's general conclusion is that, although the production in large quantity of sterilized potable water is a matter of great difficulty, involving the continual renewal of filtering materials, there are numerous methods of treatment which secure a large reduction in the number of organisms present.

Sir Frederick Abel, after investigation of a number of accidents arising from explosions of petroleum-lamps, has arrived at several definite conclusions respecting the causes of such explosions and certain circumstances that may tend to favor their production. If a lamp of which the reservoir is only partly full of oil be carried or rapidly moved from one place to another, a mixture of vapor and air may escape, and, becoming ignited in the flame, determine the explosion of the mixture contained in the reservoir. A sudden cooling of the lamp, by its exposure to a draught, or by its being blown upon, may give rise to an inrush of air which will increase the explosive properties of the mixture contained in the reservoir, and the flame may at the same time be drawn or forced down into contact with it. The glass may also be cracked by the sudden cooling, and let the oil escape. These effects may sometimes be produced by blowing down the chimney to extinguish the light. If the oil be low-test, the explosion may take place the more readily, but is relatively feeble, because the air will have been largely expelled from the reservoir by the generation of petroleum-vapor. If the flashing-point of the oil is high, the vapor will be less readily or copiously produced, but the mixture of vapor and air in the reservoir may be more violently explosive, because the proportion of air in it will be greater. Experiments have also shown that a lamp containing an oil of a high flashing-point is more likely to become heated than one containing a comparatively light and volatile oil, in consequence of the much higher temperature developed by the combustion, and of the comparative slowness with which the heavy oil is conveyed by the wick to the flame. It therefore follows that safety in the use of mineral-oil lamps is not to be secured simply by the employment of oils of very high flashing-point, and that the use of very heavy oils may even give rise to dangers which are small, if not entirely absent, with oils of comparatively low flashing-points. From these principles, and as the result of his experiments, the author derives the following suggestions, attention to which may serve to reduce the risks of accidents in the use of petroleum and paraffine oil: The reservoir of the lamp should be of metal, and there should be no opening or channel of communication with it at or near the burner, unless it be so guarded or so small that it can not be permeated by flame. The wick should be of soft texture and loosely plaited, should fill the entire space of the wick-holder without being jammed in it, should be thoroughly dried, should be but little longer than to reach the bottom of the reservoir, and should never be immersed to a less depth than about one third of the total depth of the reservoir. The reservoir or lamp should always be almost filled before use. If it is desired to lower the flame of the lamp for the time, care should be taken not to lower it below the metal-work deeper than is absolutely necessary. When the lamp is to be extinguished, the flame should be lowered till there is only a flicker; the mouth should then be brought to a level with the top of the chimney, and a sharp puff of breath should be projected *across* the opening.

Mr. A. H. Allen, of Sheffield, in the British Association took notice of the fact that cases of lead-poisoning do sometimes occur through people drinking water conveyed in lead pipes; and, though only one person in a thousand might be affected from this cause, the matter deserved the attention of chemists. The most discordant statements are made as to the cause of lead-poisoning, some saying that soft and others that hard water is most likely to produce it; but the author thought it might depend not only on the presence of salt in water, but on the character of the salt. Two cases were mentioned in which water which had previously behaved in a neutral manner had begun to act on lead, and in one of them the water, coming from a ferruginous spring, was found to contain a free acid, which was neutralized and the poisonous action removed by filtering the water through limestone. Prof. Brazier, of Aberdeen, had pointed out to the author that water would act on lead, particularly when it was mixed with snow-water; and his own experience fully bore out that observation. The late Dr. Angus Smith considered that even one fiftieth of a grain of lead per gallon of water should not be allowed; and it might be admitted that one tenth of a grain of the metal per gallon of water was objectionable, and when the quantity rose to half a grain it was very dangerous. Sulphate of lead, which had sometimes been regarded as insoluble, was soluble in water to the extent of about three grains per gallon, and hence, for the purpose in question, was capable of producing highly poisonous effects. Carbonate of lead was soluble in water to the extent of about two grains per gallon; but basic carbonate was highly insoluble, sixty gallons of water being required for the solution of one grain. The mysterious "fits" water occasionally took in acting upon lead rendered the subject one of great practical importance. Prof. Frankland, speaking of nitrates and nitrites in water, said that the fact that salt was present did not affect the action of water on lead, as experiments had shown him that the salts were absolutely inert. Two essential conditions to the action of water on lead were the presence of dissolved oxygen and the absence of free carbonic acid. It was almost, if not quite, impossible to get a solution of carbonate of lead in water. The two kinds of action of water on lead—the deposition of salts of lead and the production of dissolved salts—ought to be distinguished. Snow-water is dangerous in lead pipes because it is rich in dissolved oxygen and free from carbonic acid. Prof. Dewar spoke of the effect of organic matter, particularly of peat, in very small quantities, in preventing action upon lead. Prof. Frankland said the public should be warned against the use of tin-lined lead pipes, unless they knew how they were manufactured, as an alloy of lead and tin was sometimes produced which was more acted upon by water than lead alone.

CHILI, an independent republic of South America. (For details relating to area, population, etc., see "Annual Cyclopædia" for 1883 and 1884.)

Government.—The President of the Republic is Don Domingo Santa María, whose term of office will expire on Sept. 18, 1886. The Cabinet was composed of the following officers: Minister of the Interior, Don J. M. Balmaceda (April 12, 1882); Foreign Affairs and Colonization, Don A. Vergara Albano (Jan. 18, 1884); Justice, Public Worship, and Public Instruction, Don J. I. Vergara (1883); Finance, Don R. Barros Luca (Jan. 18, 1884); and War and the Navy, Don C. Atúnez (May 6, 1884). The Chilian Minister to the United States is Don Joaquin Godoy. The Chilian Consul at New York is Don B. R. de Espriella; and the Consul-General at San Francisco, Don J. de la Cruz Corda. The United States Minister to Chili is Hon. William R. Roberts. The United States Consuls to Chili are: D. M. Dunn, at Valparaiso; J. Grierson, at Coquimbo; and J. F. Van Ingen, at Talcaguana.

The Political System.—The Chilian President serves for five years, and a presidential election will be held in 1886. The Congress consists of two houses. The Senators serve for six years, and the Deputies for three. Chili is not a federal republic. Its Government is centralized, and the President has almost absolute power, for he appoints the intendants of provinces, governors of departments, and other officials. The war has given to Chili more of a military character than it had before. Chili thus far has been exempt from those forcible overturnings that have been frequent in other Spanish-American republics. Revolutions have been attempted several times, but always quickly extinguished. The Chili of to-day is a strongly organized and centralized oligarchy; and the fact that the country forms a comparatively narrow strip of land between the Pacific Ocean and the Andes does not leave scope for any revolution to gather and recruit its forces in the interior.

Elections.—The election for Senators and Representatives took place on March 29, and resulted, as anticipated, in the complete triumph of the Liberal party. This election was not considered the expression of the popular will. There were wholesale intimidation and fraud by both parties, and an insolent interference on the part of the Government, which stifled a free expression of opinion.

Army.—The strength of the army in 1885 was 7,046 men, commanded by 478 officers. The total number of officers is 1,004; but this number will be reduced gradually. During the most active period of the war (end of 1880 and beginning of 1881) the effective strength of the National Guard was 39,000 men. The number of men that served in the mobilized National Guard during the war was 51,333, and 2,174 officers. The sedentary National Guard, from Pisagua to Magallanes, consists of 47,500 men and 2,047 officers. For years to come the pension list will absorb at least $400,000 a year. During the war, 150 cannon and 25 machine-guns were captured, which have all been put in good repair, and are ready for service. The Minister of War recommends the further fortification of Valparaiso, and the erection of defensive works at three northern ports, in order to insure possession of the coal-fields. He says the arsenals contain arms and ammunition enough to put 80,000 men in the field with a full complement of artillery, without drawing on the arms in the hands of the militia.

Navy.—According to the report of the Minister of the Navy, dated April 25, 1884, the Chilian Navy was, on that date, composed of the following vessels:

CLASS.	NAME.	Displacement.	Diameter of armor-plates.	ARMAMENT.		Mitrailleuses.	Indicated horse-power.	Crew.
				Guns of old style.	Modern artillery.			
		Tons.	Mm.					
Ironclad	Blanco Encalada	3,500	2·25	6	5	6	3,000	242
Ironclad	Almirante Cochrane	3,420	2·25	..	10	6	2,820	238
Monitor	Huáscar	1,763	1·12	5	2	3	900	134
Corvette	Chacabuco	1,490	....	5	2	3	1,100	129
Corvette	O'Higgins	1,490	....	3	3	4	1,100	163
Corvette	Abtao	1,600	....	..	5	4	800	179
Gunboat	Magallones	950	....	4	..	..	1,040	105
Gunboat	Pilcomayo	800	....	..	4	3	1,080	128
Cruiser	Angamos	1,200	....	..	1	1	1,485	110
Transport	Toltén	427	....	4	..	..	270	66
Pontoon	Valdivia	....	....	..	..	..	....	50
Escampavia	Lantaro	....	....	3	..	1	....	31
Escampavia	Graviota	....	....	..	..	..	....	10
Escampavia	Toro	....	....	1	..	..	....	8
Escampavia	Valparaiso	....	....	..	..	..	....	12
Total		16,640	....	31	32	31	13,595	1,605

Postal Service.—The number of post-offices in operation early in 1884 was 343; of letters dispatched, 10,204,097; sample packages, 19,950; law notifications, 13,786; Government dispatches, 493,572; newspapers, 11,046,534; aggregate number of items of mail matter, 21,777,939. Receipts, $378,749. By decree of the President, dated May 27, 1884, the post-offices of Chili were authorized to sell literary and scientific books of Chilian authors. The books are addressed by mail to a larger central post-office, which charges 5 per cent. commission for the sale of all it sells direct within its district, and at the same time distributes books among the smaller offices in outlying districts, where the commission charged is 10 per cent. The joint post-offices received, during the latter half of 1884, 38 different works, numbering together 10,079 volumes, and had sold thereof at the close of the year 3,850.

Railroads.—There were in operation early in 1884 602 miles of Government lines of railway, and 790 miles belonging to private companies—together, 1,392 miles. In 1885 the republic was still owing, on account of her railways, $22,470,000. In 1883 these railways earned a revenue of $5,516,049, on a capital originally less than $60,000,000, which is now reduced to the sum mentioned. Good management and liberality on the part of the Government have brought about this result. In September, 1885, the Government was pressing the fulfillment of the contract for the Aranco Railway. The contractor for the San Javier and Tomé Railroad at the same time informed the President that the $5,000,000 required for the project had been raised in London. The number of locomotives shipped from the United States to Chili during the fiscal year 1883–'84 was 19, worth $232,569.

The street-car managers of Chili have added another occupation to the list of those in which women may engage, and use them as conductors upon their cars. The experiment was first tried during the recent war, when all the able-bodied men were sent to the army, and proved so successful that their employment has become permanent, to the advantage, it is said, of the companies, the women, and the public. The conductresses belong commonly to the mixed race of Spanish and Indian blood. They wear a neat uniform of blue flannel, with a jaunty Panama hat, and a many-pocketed white pinafore, reaching from the breast to the ankles, and trimmed with dainty frills. In these pockets they carry small change and tickets; while hanging to a strap over their shoulders is a little portmanteau or satchel, in which is a lunch, a pocket-handkerchief, and surplus money and tickets. Their wages are $25 a month.

Telegraphs.—In 1884 there were in operation 131 offices, 115 of which belonged to the Government. The length of lines was 6,895 miles;

5,635 were government property. The total number of messages forwarded was 423,700, and the receipts amounted to $378,749. The new telegraph line recently established to Lota, Coronel, etc., by the American Telegraph Company was opened for traffic at Santiago on Aug. 21, 1885.

Finance.—The report of the Chilian Minister of Finance, made on Oct. 1, 1885, shows that the public income in 1884 amounted to $39,910,133, and the expenditure to $39,225,118; that on January 1 of the present year there was a balance in the treasury of $14,511,632, against which there were payments to be made amounting to $7,606,468, the net balance on January 1 being $6,902,164. The estimated expenditure for the present year is $35,084,905; but it is calculated that the real expenditure will not exceed $33,600,000. The estimated revenue for 1885 is $36,580,000. December, 1883, the foreign debt amounted to $34,870,000, while in December, 1884, it stood at $33,843,000. The home debt was reduced to $333,394 in 1884. The total national debt (home and foreign) amounted, with interest, on Jan. 1, 1885, to $60,430,329. The mint coinage in 1884 was $1,992,394, or $473,903 in excess of the coinage of 1883. The budget for 1885 was:

INCOME.	
Customs revenues	$24,000,000
Government railroads	6,000,000
Post-office and telegraphs	500,000
Land-tax	1,100,000
Patent dues	600,000
Income-tax	300,000
Tax on inheritances	200,000
Excise	300,000
Stamp-tax	600,000
Sale and renting of Government lands	308,000
Interest collected	400,000
Guano-sales	1,500,000
Sundry receipts	38,000
Total	$35,846,000

OUTLAY.	
Interior	$10,403,173
Foreign Affairs and Colonization	727,674
Justice, Public Worship, and Instruction	3,839,650
Treasury and Agriculture	9,994,237
Army and Navy	9,552,680
Total	$34,517,414

On Sept. 9, 1885, the Government concluded in London negotiations for a 4½ per cent. loan of £808,900, at 89, for the purpose of completing the payment of the balance of the 1866 7 per cent. loan. There were among European capitalists three times as many applications to subscribe to this Chilian loan as could be satisfied, the amount applied for aggregating £2,500,000.

Paper Money for Duties.—There not being silver in circulation to pay the duties, the Government charged a premium in accordance with the current degree of depreciation of the paper dollar, and in August, 1885, charged 54 per cent. extra. In order to do away with this inconvenience to the extent of his ability, the Minister of Finance fixed the premium for September at 50 per cent.; for October at 45; November at 40; December at 35, and from January to June, 1886, at 20 per cent., in the settlement of duties.

The Tariff.—The tariff was being studied during the latter half of 1885 by the Valparaiso Chamber of Commerce, and it is expected that they will soon report the result of their deliberations. The following table shows the increase of revenue from customs:

1833	$1,025,385	1863	$4,259,583
1843	1,735,432	1873	8,145,353
1853	3,358,540	1883	25,215,409

Commerce.—The total trade of Chili with foreign countries reached in 1884 $125,237,895, against $133,959,114 in 1883. The import in 1884 was $52,888,846, reduced to silver coin, and the export $72,351,049, calculated in paper money. On reducing the latter to silver, it is found that it amounted in coin to $59,625,401, or $6,738,555 more than the import. Silver was exported to the amount of $3,531,858, being $457,016 in excess of the amount shipped in 1883. Copper exportation was represented by 43,378 tons of 2,240 pounds, being 2,738 tons more than in 1883. The import decreased $1,339,705; the export, $7,381,504; there having been shipped $4,130,036 worth less guano, and $1,176,456 less nitrate of soda. The increase in copper production was due solely to the depreciated paper money.

The ensuing tabular statements show the export of nitrate during the calendar years 1882, 1883, and 1884, and the first half of 1885:

DESTINATION.	1882.	1883.	1884.	1885.
	Qtls.	Qtls.	Qtls.	Qtls.
To the north of Europe	9,108,800	11,449,227	10,890,810	3,214,376
To the Mediterranean	153,180	200,305	186,576	26,582
To the United States on the Atlantic	1,237,593	987,367	1,211,714	670,670
To the United States on the Pacific	203,453	157,390	49,073	48,739
Total	10,703,026	12,794,289	11,838,173	3,960,367

The extraordinary expansion which Chili's foreign trade has experienced is best understood by referring to the following statistics:

YEAR.	Import.	Export.	Revenue from customs	VESSELS.	
				Entered.	Tonnage.
1870	$28,224,139	$26,975,819	$6,438,182	5,091	2,510,000
1880	30,163,421	51,648,549	10,645,949	6,000	4,020,533
1881	39,564,814	60,525,859	22,425,046	7.409	5,484,122
1882	50,992,217	71,209,604	22,896,272	8,232	6,616,330

During the forty years from 1844 to 1883, both inclusive, Chili imported from abroad merchandise to the amount of $928,858,184, and exported products aggregating $1,076,797,569; excess of export, $147,939,385.

Out of a total foreign trade of $2,005,655,753, the share of England was $1,018,324,321, or 57 per cent.

The American trade with Chili has been as follows:

FISCAL YEAR.	Import from Chili into the United States.	Domestic export from the United States to Chili.
1885	$604,525	$2,192,672
1884	537,936	3,236,945
1883	435,584	2,837,551

There were on April 30, 1884, navigating under the Chilian flag, 30 steamers, with an aggregate tonnage of 14,896; 4 ships, with 4,457 tons capacity; 84 barks, having a capacity together 40,615; 8 brigs, with 2,188; 6 schooner-brigs, with 1,552; 10 schooners, 1,166; and 16 sloops, 916; together, 158 craft of all sizes, aggregating a joint capacity of 65,790 tons.

The Government Guano Consignment.—The confidence that even the most cautious European and American bankers place in the honesty and fair dealing as well as financial solidity of the Chilian Government was best shown on the occasion of the contract for a great guano consignment of 400,000 tons, which it made with the Compagnie Commerciale Française, and the money advanced thereon by Messrs. Seligman Brothers & Co., and the Banque d'Anvers, jointly in the spring of 1885. This contract involved advances in the shape of a deposit of £200,000, and the two banking establishments named on behalf of the consignees of the guano made it in blank, that is to say, without having in their possession bills of lading or any security whatever beyond the signature of the Minister of Finance. The conditions of the contract itself were mutually advantageous. The Government engaged to consign guano during three consecutive years, 150,000 tons each the first two years and the remaining 100,000 tons the third year, to the Compagnie Commerciale, in Europe, allowing it a commission on sales of 2½ per cent. while remaining under instructions from the Government as to the prices the latter is willing to accept for its guano. The Compagnie Commerciale engages to advance all expenses of 12*s.* 6*d.* a ton on the guano, and furthermore advances £1 10*s.* a ton on the shipments from Tarapacá, and £1 a ton on those from Lobos, on which money advanced the Government pays the same 5 per cent. per annum interest. These advances the Compagnie will be reimbursed for out of the proceeds of sales at the rate of 10*s.* a ton, the balance which the Government will owe. During the first six months of 1885 no guano arrived in England from the West Coast, but there were stocks, and consumption was decreasing. On the Continent the stock on July 1 was 90,000 tons, but there was a lack of demand there likewise. The price asked on July 1 was 15*s.* per unit of ammonia contents in the guano, and 1*s.* 10½*d.* per unit of phosphate per ton, but there would have had to be an abatement from these conditions to effect a sale, both ammonia and phosphate being obtainable from 25 to 30 per cent. cheaper from other raw material.

By decree of Nov. 29, 1884, one million tons of guano were to be sold at public auction, out of which Peruvian bondholders were to receive 50 per cent. of the net proceeds.

Nitrate of Soda.—The combined nitrate-producers on the West Coast resolved early in 1885 to create a common fund of £5,000, out of which £1,000 were to be appropriated toward paying a premium to the author of the best treatise on "the analysis and most profitable application of nitrate in agriculture," such pamphlet to be translated into the leading languages, and circulated throughout Europe and America. The remaining £4,000 of the fund were to be used toward establishing entrepots of nitrate in Europe and America, from which samples for experiments were to be delivered gratis to agriculturists. In February a general meeting was held by nitrate-producers at Iquique, and it was unanimously agreed to restrict production to 7,000,000 quintals per annum in 1885 and 1886, and not to increase their capacity during these two years, nor found any new establishments.

During the excitement about the Anglo-Russian Afghan frontier dispute, the German Government was asked by thirty-three Hamburg ship-owners whether nitrate of soda would be liable to be considered contraband of war and seized as such, while in transit at sea, by belligerents. The answer was that "no generally acknowledged international rules had as yet been laid down as to what merchandise should at all times and everywhere be considered contraband of war; that, on the contrary, whenever there is war belligerents designate, guided by the locality and their interests, such merchandise as they intend to treat as contraband. This being the case, the question has not yet arisen whether nitrate ought to be the subject of international discussion because liable to be viewed as contraband. But the Government coincides with you in the opinion that the former treatment of nitrate as contraband is hardly applicable to the times we live in, inasmuch as it can not be applied at once to the purposes of war, but can only be prepared for the same through a tardy process."

Claims against Chili.—On March 13 it was officially announced at Santiago that the complaints made by the Chilian Government against Señor Netto, President of the International Arbitration Court, on the Peruvian war claims, had been admitted as well-founded, and that Dom Pedro II, the Brazilian emperor, had deposed Netto from his office. Chili accused Netto of systematically judging against her with an utter disregard of all precedents of international jurisprudence. But it was understood at the time that his withdrawal from the arbitration court would not affect the decisions of the arbitrators already made, not even those made under his direct influence. These decisions altogether assess Chili for $29,000,000 damages in favor of Peru.

The Government and the Church.—The organized opposition of the Church to the civil marriage law of 1883 has produced a sensation throughout the country. The Government will not allow a clerical marriage any force in law, nor will the Church allow any force in religion to a civil marriage. As most of the women are on the clerical side, and most of the men on the Government side, there is a general suspension of marriages, except among the very poor, who are content with the clerical rite alone, or indifferent to any ceremony at all. The proportion of illegitimacy in births in Chili is prodigious, exceeding 23 per cent. The clergy affix conditions to the bestowal of the sacrament of marriage to which men of character and independence are unwilling to submit. Neither party shows any sign of yielding. It is intended to remedy this source of discord by prohibiting the clergy from marrying any persons who have not a certificate of civil marriage. The clergy, on the other hand, threaten that in case this is done they will refuse to marry any who have been previously married by civil law. The political issue in Chili has thus become the repeal of the law of 1883. The archbishop issued an edict excommunicating the President of the Republic, the members of his Cabinet, and the members of Congress who voted for the statute, and directing that a similar penalty be visited upon every communicant that obeyed it and neglected to recognize the Church as the only authority competent to solemnize marriage vows. In Chili the clergy now insist on their right to take an active part in politics, and this has been one of the causes of the low standard of political morality now prevalent, for during the elections of March, 1885, absolution and religious privileges were the prices paid for votes.

Attempt on the President's Life.—On Jan. 24 the President received through the mail, while at his residence in the capital, a package containing an infernal machine. After cutting the strings of the package, he became suspicious. The contents were subsequently carefully examined, and it was found that there was clockwork and a hammer to explode a charge of gun-cotton and ordinary powder, sufficient to blow him and his family to pieces.

Education.—A practical agricultural school was opened at Santiago on July 2. The budget for 1885–'86, at the recommendation of the Minister of Public Instruction, provides for an appropriation of $20,000 for schools at Antofagasta; $10,000 at Tacna; $3,000 at Arica; $15,000 in Tarapacá; and $8,000 for the department of Pisagua.

On June 30, the new school named for the late Francisco Arriaran, who endowed it, was opened at Santiago.

American Trade Commission.—The South American Commission, under date of Santiago, May 14, made its report to the Secretary of State at Washington on the result of its visit to Chili. The report describes the meeting of the President of Chili by the commission, and says a series of propositions was submitted to him. It continued:

The first, that the old treaty of amity, commerce, and navigation between the United States and Chili, which long since was terminated, might be renewed with advantage to both countries. In reply to this the President said that he did not see any advantage to Chili in such a treaty, and was not disposed to enter into any further conventions with foreign countries. While he personally, and the people of Chili in general, abounded in the most cordial feelings toward the Government of the United States and its people, and endeavored to imitate us as closely as possible, he could not see any necessity for a treaty, and thought the two nations could get along just as well without one.

The second proposition involved the idea of a reciprocal commercial treaty between the two countries, under which special products of each should be admitted free of duty into the other when carried under the flag of either nation. This did not meet with any greater favor with President Santa María, who was not disposed to make reciprocity treaties. His people were at liberty to sell where they could get the best prices and buy where goods were the cheapest. In his opinion commerce was not aided by commercial treaties, and Chili neither asked from nor gave to other nations especial favors. Trade would regulate itself. So far as the United States were concerned, there could be very little trade with Chili, owing to the fact that the products of the two countries were almost identical.

The next topic seemed to be received with decided favor. It was touching the establishment of a common silver coin of the value of the United States gold dollar, to be coined by each of the American republics, of an equal degree of fineness, and, to an amount which should be agreed on, to be legal tender in all commercial transactions between citizens of this hemisphere. This proposition, which has already been assented to by Mexico, Venezuela, Guatemala, Costa Rica, Ecuador, and Peru, was accepted by President Santa María as a long step toward the monetization of silver.

The fourth proposition, which invited the views of the Government of Chili as to the practicability of holding a congress of delegates from all the American republics, to adopt measures to secure peace and promote prosperity among the nations of this hemisphere, met with disfavor. His Excellency could not see the advantage of such a gathering. Chili had learned by experience that nothing could be gained, and that the general welfare was not promoted, by international conventions.

The fifth and last proposition was a general one, and invited the suggestions of Chili as to the best modes of increasing trade between that country and the United States. The President repeated what he had said previously about the impossibility of securing a large trade, but thought that if there could be direct communication by steam from the ports of one country to those of another, commerce would be greatly aided. If any steamship company in the United States would establish such communication, he believed the Congress of Chili would give it a subsidy such as was given to the Pacific Steam Navigation Company of Liverpool.

A National Exhibition.—On Aug. 20, 1885, the Intendant of Valparaiso presided at a meeting held in that city for the purpose of effecting arrangements for holding an annual exhibition of the industries of the country and a cattle-show. A committee was appointed, and was expected soon to present details for the furtherance of the project.

The Condor.—The Chilian Government has issued a proclamation declaring the condor to be an enemy of the republic. Condors have increased so rapidly within the past few years all along the entire western slope of the great mountain-chain, that they have become, by their foul habits, a scourge, increasing the already unwholesome character of the country. With the hope of exterminating them, or at least greatly diminishing their numbers, the Government offers a bounty of five dollars for every condor killed. Hunting for condors has become a regular business in the Andes mountains; but, like all the vulture family, the condor grows suspicious and wary from contact with mankind, and it has grown to know and fear a gun, so that it is now next to impossible to get within gunshot of one. Poisoning has been tried, but is not satisfactory to hunters.

CHINA, an empire in Asia, officially called Chung Kwoh ("The Middle Kingdom"). The Government is organized on patriarchal principles laid down in the books of Confucius, Mencius, and other ancient sacred writers. The Emperor has supreme despotic power, but for more than twenty years there have been minors on the throne, and during this period a regency has directed affairs. The Grand Secretariat is the highest official body in rank, but no longer guides the policy of the Government. Another body, called the Grand Council, performs the duties of a privy council, and exercises a greater influence in the conduct of affairs. There are six boards of administration which have charge respectively of the civil service, finance, ceremonies, the army, justice, and public works. There is a Court of Censors, which, in conjunction with the Board of Justice, or Punishments, constitutes the highest judicial tribunal. The doctors of the Hanlin, or Academy, draw up important state papers in classical form, and collect the records of the dynasty. The Li Fan Yuen, an important ministry, always filled by Manchus and Mongols, attends to the relations with tributary states. The Tsung-li-Yamen, founded in 1861, has charge of foreign affairs.

The provinces of Pechili and Szechuen are each governed by a governor-general, or viceroy. There is a viceroy over the Liang Kwang, or two Kwang provinces of Kwangtung and Kwangsi; one over Kiangsi, Kiangsu, and Anwhui, called the Viceroy of the Liang Kiang; one over Fuhkien and Chekiang, the Viceroy of Min Cheh; one over Yunnan and Kweichow; one over Kansuh and Shensi; one over Hupeh and Hunan, the Viceroy of Houkwang. Each of these provinces, except three, is administered by a governor, subordinate to the viceroy. The provinces of Shansi, Honan, and Shantung are directed by independent governors. In 1875 Manchuria was placed under a viceroy, called the Viceroy of Shenking. In 1884 Chinese Turkistan was also organized as a province. Since 1877 Formosa has been a governorship. The Admiral of the Yangtsze-Kiang has the rank and title of a viceroy. Pekin has its own government, subordinate to the Board of Works.

The Emperor Kwangsu is the ninth in succession from Aisin Gioro, the Manchu conqueror, who founded the dynasty in 1644. He was born Aug. 15, 1871, and proclaimed Emperor Jan. 22, 1875, on the death of Tungche. The Empress-Regent is Tse Hi, mother of Tungche.

During the minority of the Emperor the final decision in matters of state has rested with the Empress-Regent, and has been largely influenced by the princes of the imperial family, who preside over the important boards and are guided by the counsels of the men who, in the competition for preferment, in which knowledge and education are the most important elements of success, have risen to the highest administrative posts and are called to the Grand Council and related consultative bodies. Prince Kung, uncle of the Emperor, was for twenty-three years, with slight intermissions, the head of the Tsung-li-Yamen and the director of the foreign policy. Great viceroys and generals, like Tseng-Kwo-fan, Tso-Tsung-Tang, and Li-Hung-Chang, have at times exercised a powerful influence, but the main course of the state policy was directed by Prince Kung. This policy, the natural result of the last Chinese war, was one of seclusion, evasion, and timid compliance, under threats of military compulsion. When the Tonquin question arose, Prince Kung had become old and infirm. When, after declaring that an attack on Sontay would be regarded as a *casus belli*, he remained inactive after the capture of the Chinese posts in Tonquin, and finally agreed to the Fournier convention, not only the general public, but Chinese statesmen who had studied the military problem, and knew the difficulty that France would experience in conducting a campaign in the far East, were dissatisfied. The controlling minds in Chinese politics demanded new men and a new and positive foreign policy when France demanded a heavy indemnity for the Langson affair. Prince Chun was called to the direction of the foreign policy. He prepared for a long war. Three armies were thrown into Tonquin, numbering nearly 150,000 men. A stubborn defense was made in Formosa, the ports were fortified, and great efforts were put forth to organize an army and a navy that would prove equal to the contest.

Area and Population.—The area of the eighteen provinces of China proper is 1,533,650 square miles, and their population, according to the most recent official estimate, is 349,885,386, according to a computation of Sir Richard Temple only 282,161,923, and according to a recent Russian authority, 362,450,000. The immediate dependencies are: Manchuria, with an area of 362,310 square miles, and an estimated population of 3,000,000 persons; the Mongolian steppe, with an area of 1,288,000 square miles, and a population of 2,000,000 nomads; Thibet, with an area of about 651,500 square miles, and a population of 6,000,000 souls; Soongaria, or the district of Kuldja, with an area of 147,950 square miles, which has been almost depopulated during the recent wars; and Eastern Turkistan, including Kashgar, with an area of 431,800 square miles, likewise nearly denuded of inhabitants. The total area of the empire, not including Corea and Annam, is about 4,419,150 square miles, and the aggregate population not over 376,000,000.

The Army.—Official statistics give the strength of the Eight Banners as 323,800 men, and of the Ying Ping or National Army as 6,459 officers and 650,000 rank and file. Captain Norman divides the effective forces into the Army of Manchuria, numbering 70,000, armed to a large extent with Mauser rifles and with many 8-centimetre Krupp field-guns; the Central Army, stationed near Pekin, numbering 50,000 in time of peace and twice as many in time of war, recruited from the strong and brave Tartar race of northern China, and armed with Remingtons; the Army of Turkistan, which is permanently required for the defense of the western borders; and the " Braves," or territorial troops, kept at a strength of 200,000 in peace time, and capable of being raised to thrice that number in case of war. In a few of the great cities near the coast there are permanent Manchu garrisons. European officers, mostly Germans, have been employed largely as instructors and organizers since the beginning of French hostilities, and in the armies near the seaboard German drill and tactics are used.

The Navy.—China has armored vessels of the most modern types. The northern squadron, for the defense of the capital, was organized by an English officer. German officers have since introduced European drill in the other squadrons. The military and naval arsenals, under the supervision of Europeans. turn out arms and ammunition in large quantities. There were built at Kiel two ironclads with steel-faced armor, the Teng-Yuen and Chen-Yuen, sister ships of 7,400 tons displacement and a speed of 15 knots. They are plated with 14½-inch armor, and each carries four 12-inch Krupp breech-loaders in two turrets. These were detained in Germany until the cessation of the French reprisals; but two armored cruisers, each carrying two 8-inch Armstrong guns, besides 40-pounders and machine-guns, were dispatched from Kiel in 1884. Another armored cruiser, carrying two 8-inch Krupp guns in a barbette, was launched at the same place in 1883. The North China squadron has also two swift unarmored cruisers, steaming 16 knots, carrying two 26-ton Armstrong guns and four 40-pounders each, and about a dozen gunboats, each armed with a single 26- or 28-ton gun. The Loo-Choo, Shanghai, and Canton squadrons are made up of 40 or 50 unarmored steam-vessels. Several torpedo-boats of high speed, carrying Whitehead torpedoes, have been acquired recently.

Finance.—The revenue from customs in 1884 was 13,510,712 Haikwan taels, 224,000 more than in 1883, but below 1881, the year of the largest collection, by 1,000,000 taels. The customs duties bear more heavily upon exports than upon imports. The other receipts of the Government are not published. They are derived from taxes on land, grain, and licenses. The land-tax in the north does not exceed 75 cents per acre; in the south it rises to $3.25. Agriculture contributes about $45,000,000 of the imperial revenue. The total revenue is estimated at about $125,000,000. Only about half of it is actually sent to Pekin. The average expenditure on the army is $75,000,000 per annum; that on canals is about $6,000,000. The foreign debt, contracted since 1874, amounted in 1884 to $17,365,000, including a loan of $7,500,000 raised in that year. The internal debt is about $43,000,000.

The Imperial Government made arrangements in 1885 to float a new foreign loan of 100,000,000 florins in Germany and Holland.

Commerce.—The crops of 1884 were exceptionally good throughout China, yet the consequences of the recent financial crisis, the French hostilities, and low prices for silk and tea in Europe, were unfavorable to foreign trade. The total value of the exports was 67,148,000 Haikwan taels (1 tael = $1.38), a falling off of 3,584,000 taels as compared with 1883, and very nearly the same as the total for 1882. The decline in the estimated value of the black tea export was 3,584,000 taels, and in raw silk about 1,000,000 taels. The principal articles entered into the total value in the following proportions: Raw silk, 2·5 per cent.; refuse silk, 2·5 per cent.; silk piece-goods, 6·5 per cent.; black tea, 34·5 per cent.; green tea, 6·5 per cent.; brick-tea, 2·2 per cent.; sugar, 5·7 per cent.; straw braid, 3 per cent.; hides, 1·4 per cent. The quantity of raw silk exported, which was 78,000 piculs in 1880, has varied but little from 60,000 piculs for the past four years. Four fifths of the raw silk went from Shanghai, and the remainder from Canton. The price of black tea per picul (133⅓ pounds) fell from 17·60 taels in 1880 to 14·80 in 1884, and the quantity exported decreased from 1,661,000 to 1,564,000 piculs. The largest quantity is exported from Foochow, Hankow coming next, and then Shanghai, Amoy, Canton, and Tientsin. The green tea export, nearly all coming from Shanghai, was 202,500 piculs, an exceptionally large amount. The straw-braid export increased from 36,000 piculs in 1879 to 78,000 in 1884. The export of sugar was larger than in 1883, in which year there was a great increase over preceding years. White sugar is sent mainly from Swatow, and brown sugar from Takow.

The net imports in foreign vessels were of the total value of 72,760,000 Haikwan taels, nearly 1,000,000 taels less than in 1883. The value of the opium import was about the same in both years, and the imports of cotton goods, woolen goods, and other piece-goods, varied but little. In metals there was a falling off of 12 per cent. As compared with 1882 there was a decline in the total value of imports amounting to about 5,000,000 taels, mostly in woolen goods, metals, and sundries. In the opium import there was a slight increase in the Malwa drug in five years, and a considerable decrease in the quantities imported from Patna, Benares, Persia, and Turkey. The returns of the kerosene imports indicate that its use is extending into the interior rapidly. The imports of cotton manufactures have remained at nearly the same amount, a little above 22,000,000 Haikwan taels, for four years; but the total has only been kept up by increased imports of yarns and thread, while cotton piece-goods, discredited through the adulterations of English manufacturers, have declined from 21,800,000 taels in 1880 to 16,500,000 in 1884. Gray and white shirtings and T-cloths find a steady demand, which does not vary much from year to year. Drills are not imported in half the quantities sold before 1882; but for sheetings the demand has grown steadily, and the same is true for prints, chintzes, and miscellaneous fabrics. American cottons, though twice as dear as the loaded Manchester fabrics, are imported in increasing quantities. The market would be better if the public had not been prejudiced against all foreign cottons by flimsy, sized Lancashire goods. The clearances of American cottons at Shanghai were 1,348,600 pieces in 1884, against 974,900 in 1883 and 935,000 in 1882, the increase being chiefly in sheetings, which are used for clothing, drillings being used partly for clothing and partly for tents and other purposes. At Hankow the import of American drills increased from 39,645 pieces in 1883 to 43,177 in 1884, while English drills fell off from 79,873 to 39,991 pieces. The value of American cottons imported at Newchang in 1884 was $920,157, two thirds of the amount of the total import.

The European residents in the seaports of China in 1884 numbered 5,297. Of these, 2,463 were natives of Great Britain and Ireland, 433 of the United States, 532 of Germany, and 332 of France. There are 340 foreign commercial firms, more than one half of them located at Shanghai. The Russian trade, since the establishment of the Russian patriotic fleet, has been carried on by steamers running to Odessa, as well as by the overland route. The imports from Russia are only one third in value of what they were before 1855, while the exports of tea to Russia are four times as great.

The British merchants are commonly young men, well prepared by previous training, with ample credit and connections with strong British houses. German manufacturers, by co-operating with each other, by testing the market with small shipments, and by watchfulness on the part of consular officials, are rapidly extending their trade in Chinese markets. Anticipating an increased demand for European manufactures upon the opening up of the country to steam communication, they have sent agents with models and patterns all over China. They were the first in the field in soliciting orders for railroad materials. A society has been founded for the promotion of German trade in China and in other parts of Asia and the Mediterranean ports. Imitations of American drills and other cotton goods have lately been fraudulently put into the market as American goods by European manufacturers. The Chinese, with whom commercial probity is a national virtue, are inclined to break off dealing upon the slightest suspicion of sophistication and fraud, a circumstance that accounts for the decline in the cotton piece-goods trade. Consul Seymour, of Canton, recommends American firms to co-operate in sending out quarterly or oftener small assorted cargoes to be delivered to retailers from the vessel, chartered by half a dozen or more firms for the purpose. Frequent shipments of provisions, and also of cloths and similar goods, which become damaged during the rainy season, would prevent the losses that must be taken account of in sending large consignments of perishable goods.

Industry and Agriculture.—Industry is extremely flourishing throughout the whole of central China. The use of machines and other technical appliances is unknown. Small farms form the bulk of the agricultural distribution; each plot of land is manured like a kitchen-garden. Vegetables are generally cultivated, as also are rice, wheat, and barley. Tea, cotton, silk, and sugar represent important articles of commerce. Industry yields place to agriculture, although manufactures—silks, porcelain, various kinds of carved wood-work, as well as mats—enjoy a generally high reputation. Agriculture and industry are mainly confined to the thickly peopled provinces along the seaboard and the Yang-tse river. The neighboring countries of China are much behindhand in point of industrial prosperity.

Railroads and Communications.—Internal commerce is chiefly carried on by water routes. Many thousands of boats navigate the rivers and canals. The trouble that would result from displacing this industry, and the opposition of the people on that account and on religious grounds, deterred the authorities from constructing railroads, until their strategic, political, and economical importance was impressed upon them during the French war. Li-Hung-Chang, the progressive Viceroy, then persuaded the central Government to sanction the introduction of railroads in principle, and even to begin the construction of certain lines. In the prospectus of the last Chinese loan special mention was made of these undertakings. A line is proposed to run from Pekin to Tientsin, another from Tientsin southward to Chin-Kiang-fu, another to connect Nanking with Hangchow or Shanghai, and a fourth to connect Canton with Nanning, near the southern frontier. China possesses, besides the water-ways, 20,000 imperial roads, most of them badly kept, but having an enormous traffic.

In December, 1884, the Government telegraph lines were 3,089 miles in length, with 5,482 miles of wire.

Navigation.—During 1883 the number of vessels entered and cleared at Chinese ports was 23,863, tonnage 17,589,914; the number of British vessels, 14,205, of 11,003,296 tons; of Chinese vessels, 6,265, of 4,941,728 tons; of German, 1,610, of 774,017 tons; of Japanese, 256, of 191,861 tons; of American, 593, of 150,703 tons; of French, 177, of 181,056 tons.

The Amoor Gold-Mines.—Rich deposits of gold were discovered in 1883 in the desert tract of Manchuria wedged in between Corea and the Russian possessions around Vladivostock, within fifteen miles of the Russian frontier. Chinese and Coreans flocked to the new mines, and they were soon joined by Russian miners. The Siberian authorities warned Russians against crossing the frontier, and at first confiscated the gold of those who returned. The prohibition was, however, disregarded, and a large community of foreigners was in the course of time congregated in the gold-field. Siberian newspapers gave fanciful accounts in which the miners were described as Californian and Australian gold-diggers, who set up an organized elective government, with a president, and twenty-two administrative districts, and a system of taxation. The adventurers were said to be well armed and determined to defend themselves in their possession of the diggings, which they looked upon as their property. The newly discovered gold-mines are situated in the district opposite the town of Ignaschin. The Chinese prefect of Aigun, who according to the Russian press was not aware of their existence till January, 1885, went to Blagovestchensk to complain to the Russian governor. The latter declined to interfere, and recommended the Chinese authorities to settle the matter with the trespassers. A force of 500 Chinese was sent to oust them. The miners refused to leave, but offered gold to the soldiers. The Chinese authorities, anticipating complications with Russia and the probable seizure of the mining district by the Russians, who collected troops on the frontier at that point, sent a large body of Manchurian troops, said to number 10,000 men, to guard against Russian encroachments.

Journalism.—The Chinese native press is an institution that has sprung up within a few years, and first became an important feature of the national life during the French hostilities. The Government has maintained an official gazette at Pekin for ages, in which its decrees and announcements are published; yet, notwithstanding the literary tendency of the Chinese, newspapers for news or criticism never existed formerly, nor would they have been suffered to grow up at the present time if the protection of foreign capital invested in them and the security of Hong-Kong and the foreign quarter of Shanghai had not saved them from suppression by Chinese officials. Satirical squibs, pasquinades, and placards have been the medium of political criticism. The mechanical means of printing native newspapers have existed for many years through the enterprise of American and English missionaries, who have had fonts of admirable metallic type in considerable variety manufactured for the printing of their missionary publications. The newspapers lately started are made up of abstracts of the contents of the Pekin and provincial gazettes, news and comments relating to national and local affairs, articles on foreign relations, and translations from the foreign press. During the Franco-Chinese war these latter features were the most prominent, and greatly increased the vogue of the native press. The accounts of the military actions of the war were fantastic inventions, and the grossest ignorance of foreign affairs and of the art of war pervaded all these articles, which were characterized by a rabid *chauvinism.* In criticisms on the acts of officials and the domestic policy of the Government the native press took a much higher tone. The censures, cloaked in an ingenious and polished style, were often bold and severe. The "Shen Pao" of Shanghai, the leading native paper, which has been in existence twelve years, has succeeded in having decrees of the provincial authorities reversed by the Pekin Government. Prince Kung, when at the head of the "Tsung-li-Yamen," refused to suppress this paper at the request of the Governor of the Chekiang province, whom it had attacked.

Missionaries.—The general awakening of the Chinese Government and people to the value of European science and inventions has smoothed the path for the missionaries, who are penetrating the interior in increasing numbers. Except for occasional outbreaks of anti-foreign fanaticism, which are always due to some galling provocation given by the consular authorities or some aggressive act of foreign governments, the missionaries have been treated with kindness, though their teachings are regarded with contemptuous indifference. The unsympathetic attitude of the Calvinistic missionaries toward what they regard as idolatrous ancestor-worship caused them to be regarded by the generality of the Chinese as the teachers of a repulsive and inhuman religion. The Jesuit and Lazarist friars, who dressed in the national garb and taught a kindlier religion, were more successful, and were often on the best of terms with the provincial authorities; but wherever attrition occurred it was often aggravated by the misguided interference of the French diplomatic representatives. The services of the missionaries during the recent famine in northern China greatly elevated them in the respect of the authorities and the people. A number of Protestant missionaries of a novel class have lately entered the field—Anglicans educated in the English universities, many of them athletes, and some of them men of fortune. The improvements begun in the military organization give a new importance to the class of medical missionaries, who in their work of organizing hospitals become an adjunct of the Chinese army. The number of Roman Catholic missionaries scattered throughout the empire was estimated in the beginning of 1885 at 700 Europeans and 560 natives; the number of converts was variously estimated at from 500,000 to 1,000,000. The number of Protestant missionaries was about 360, with 22,000 nominal converts.

Mission from the Vatican.—While the French war was still in progress, Pope Leo endeavored to enter into relations with the court at Pekin and secure protection for the missionaries and Christians of the Catholic faith in China. During the eighteenth century, Roman Catholic missionaries were honored with the intimacy of Chinese emperors, and aided in their efforts to make converts. At the present time missionaries are regarded with disfavor by the officials, and their converts are outcasts among the people. Whenever any occasion, such as the French war, prompts an outbreak of mob violence, they become the victims of bloody persecution. In the early part of 1885 the Canton populace was inflamed against the Christians by the native press; Shamien was burned and plundered, and all the Catholic and Protestant chapels in the adjacent province were destroyed. The extra-territoriality which France secured for missionaries by the treaty of 1860, and the endeavors of the latter to extend their privileges to their converts, has been a fertile cause of difficulties with officials in the interior. The interference of missionaries in the native judicial administration on behalf of Chinese Christians has been the cause of frequent diplomatic disputes. The successful intervention of the diplomatic representatives of France, who assume to be the protectors of all Roman Catholics in the East, and the political powers thus secured to the missionaries, only rendered Christianity troublesome and obnoxious to the authorities. In May, 1882, a leading Chinese statesman made an official proposition to the Holy See for a change in the political relations of the missionaries, intended to remove the causes of constant friction between them and the officials. On the outbreak of the war with France, orders were given by the Government not to molest Frenchmen. Nevertheless, persecutions of missionaries and native converts took place in all parts of the empire. Pope Leo wrote a letter to the Emperor, dated Feb. 1, 1885, in which he thanked him for the edict for the protection of the Christians, and implored him to extend his patronage so that they suffer no harm. The missive was intrusted to Father Giulianelli, who had been a missionary in China. He was accorded a reception upon his arrival at Pekin such as is never given to a diplomatic representative. He discussed the proposition made three years before with the Chinese ministers, and returned to Rome in July with the suggestions of the Chinese Government. The Vatican and the Pekin authorities are said to have both agreed to the plan of the Chinese statesman. This solution of the missionary question transfers the control of the interests of the missionaries of the Roman Catholic Church from the French minister, whose relations with them were broken by the French war, to an accredited legate of the Pope, who will permanently reside at Pekin, and will be treated on the same footing as the ministers of the powers. All complaints of Roman Catholic missionaries, of whatever nationality, are to be addressed to him, and he will be at liberty to address any representations he may see fit to the Chinese Government.

The War with France.—At the beginning of 1885 the Chinese had won successes in Tonquin, and were better prepared to cope with the French in Formosa and the China seas, so far as concerned armaments and defenses. There was also a strong war-feeling among the masses. The wealthy and official classes, however, who had been forced to contribute to the military expenses, were desirous of peace. The backbone of the Chinese resistance was broken; but the situation was so entirely analogous in France, that there was a motive on both sides to continue the conflict in the hope of the other Government yielding first to the exigence of finance and internal politics. Moreover, the proposals of the French Government before the Tsung-li-Yamen required, in addition to the ratification of the convention of Tientsin, the payment of a heavy war indemnity, which would strain the financial resources of the Imperial Government more than providing a larger sum for defense, besides the sacrifice of honor. Prince Chun and the other ministers in power were anxious to end the dangerous state of things; but, like the French ministers, they were fettered by their previous declarations. At a meeting of the new Council, called to consider the French proposals, the Empress commanded the irresolute ministers to consult their predecessors, Prince Kung and Pao-Chung-Tang; and, when the latter declined to advise because they did not have the threads of the negotiations, she punished the ex-ministers with disgrace.

A national spirit and feeling of patriotism that the Imperial Government had not before been able to enlist was now kindled against the French. Chinamen in America, Australia, Java, and Ceylon sent contributions to a war fund. Private contributions were liberally given in China. Official peculators emptied their hoards, though not always willingly.

German military and naval officers out of service volunteered in large numbers, and flocked to China, in all kinds of disguises, to serve as military instructors and commanders for the Chinese. They were secretly engaged in Europe by Li-Fong-Pao. In answer to a protest from the French Government, the German authorities declared that they had no power over the actions of private individuals. The Germans introduced their own drill and tactics in the camps at Shanghai, Tientsin, and elsewhere. By the beginning of March there were 150 German officers in the Chinese service. The energy of Chinese administrators and the knowledge and efficiency of the European experts soon wrought a change in the character of the Chinese army. Torpedoes were planted in the harbors at Canton and the other principal ports. The navy was improved at so rapid a rate that the authorities expected soon to be in a position to meet the French fleet in an open sea-fight. Li-Hung-Chang had two of the German officers commissioned as generals, and intrusted them with 120,000 men. They began by arming the whole force with the Mauser rifle. In the navy the Germans had Armstrong guns discarded for Krupps.

The Blockade of the Coast of Formosa.—The so-called "pacific blockade" of Formosa the English Government contended was illegal. It was prepared to admit that there was a state of war in Chinese waters; but, if France insisted that peace existed, it denied the right of French cruisers to seize English vessels that attempted to force the lines of the irregular blockade. Other governments were prepared to admit the principle of a blockade in a "state of reprisals," but only so long as it was effective. For several weeks the blockade was suspended, but without notice. The renewal of the blockade between the South Cape and Eyka was announced to begin January 7. After the French vessels were most of them called away from the coast of Formosa there was no blockading vessel at some of the ports, and the Chinese seized the opportunity to send over large quantities of provisions to the island.

Proclamation of the British Foreign Enlistment Act.—In January the British Government issued instructions to the governors of its Eastern colonies to enforce the foreign enlistment act of 1870, thus depriving both belligerents, especially France, of the advantages of carrying on war without a formal declaration of war. The act had been gazetted in Hong-Kong several months before, but no steps had been taken to enforce it. It not only prohibits the enlistment of men to serve against a friendly state, but makes it an offense to equip a ship, or add to the equipment of a ship, by furnishing tackle, apparel, furniture, provisions, arms, munitions, or stores, or anything that is used to adapt a ship for the sea. The Chinese complained that the French ships were allowed to coal, revictual, and refit at Hong-Kong, that they were subjected to no quarantine, and that English pilots were supplied for the navigation of the Min. A cause of bitter complaints was that Chinese laborers were punished by the British authorities for refusing to work on the French men-of-war docked for repairs. The striking coolies were in an unfortunate plight, because, if they helped repair the ships, their families would be subjected to severe penalties by the Chinese authorities on the mainland. Although they demanded that France should be treated as a belligerent, the Chinese were not entirely willing to be deprived of the privilege of purchasing arms, ammunition, torpedoes, vessels, and other materials of war and supplies in British markets. In December the Marquis Tseng urged his Government to protest against the purchase of transports by the French in England, at the same time reserving China's right to purchase arms and munitions everywhere. The Governor of Kong-Kong issued a proclamation on January 23, announcing the enforcement of the act.

The action of the English Government impelled the French to exercise all the rights ot naval belligerents against neutrals, although they as well as the Chinese still refrained from a formal declaration of war. The blockade of Formosa was a failure. It was constantly being forced by Chinese junks, and later by English and American blockade-runners. Without injuring the Chinese, it exasperated neutrals, and was likely to lead to complications. In the land operations, the French commander retired before the victorious Chinese, and was obliged to abandon the plan of operations against Tamsui for the time being. He then conceived the idea of starving the capital province by intercepting the rice-supply that is brought into the Gulf of Pechili after the ice breaks up in March. He sailed away from Formosa with seven of his ships in quest of the Chinese fleet, and with the object of blockading the Yang-tse-Kiang and the Gulf of Pechili, and intercepting junks and other vessels laden with rice for Pekin. His squadron consisted of the ironclads Bayard and Triomphante, four cruising frigates, and a gunboat. On the 15th of February he encountered a Chinese squadron in the roads of Sheipoo. Torpedo-boats with spar torpedoes were sent against the Chinese ships. They were driven off several times by the machine-guns. At length they crept up in the night under cover of a thick fog and planted torpedoes in two of the five Chinese vessels. The crews escaped from the sinking ships in boats. The vessels destroyed were the frigate Zu-Yuen, with twenty-six guns, and the corvette Chinching, with seven guns, both slow, unarmored, wooden vessels. Some weeks later the Pingon, carrying dispatches to Formosa, was captured. No other Chinese war-vessel was destroyed or taken until just before the arrival of the notice of the conclusion of peace, when the cruiser Estaing captured a ship with 750 men, officers, and three mandarins on board. On March 1 a cannonade was exchanged with the fortress of Chinghai, at the mouth of the Ningpo river. The Chinese naval vessels there escaped beyond the range of the French guns.

Before his departure from Formosa the commander of the French naval forces received orders from France to exercise belligerent rights, including that of searching neutral vessels for contraband of war, and the capture of vessels on which such should be found.

Rice declared Contraband of War.—A circular note was sent to the European powers on the 10th of February in which it was said that "the French Government has found itself compelled, on account of the peculiar conditions under which the hostilities between France and China have developed, to regard rice as contraband of war, and has accordingly instructed the commanders of French vessels of war to treat the transport of rice as the transport of contraband of war, on and after February 26." In the Paris Congress of 1856 the laws of naval warfare and the rights of belligerents and neutrals on the sea were discussed, and the new regulations were recognized afterward by all the European powers and by many of the powers outside of Europe. The articles that were to be considered contraband of war were not defined. During the Franco-German War the French Government protested because Germany declared coal exported from England to France to be contraband of war. The English Government then took a middle ground, contending that coal was or was not contraband according to its destination. In his dispatch giving notice to the powers, dated February 21, M. Ferry said that, having information that large quantities of rice were about to be forwarded to the north of China, the stoppage of which would exercise an efficacious influence on the Pekin Government, the French authorities decided to interdict the trade in rice, in preference to blockading Shanghai and the other treaty ports. In the first energetic protest of Sir Henry Parkes, the British minister in China conveyed the impression that his Government would resist seizures of rice by physical force. Lord Granville explained that the legality of the seizure would be left to be determined by the French prize court under the reservation of ulterior diplomatic action. In March the French Government gave notice that lead would be treated as a contraband article.

Objections were raised by the neutral governments against the new doctrine now enunciated by France that food, without distinguishing whether it is destined for the military or naval forces of the belligerent or for the support of the population, could be treated as contraband. The measure was subsequently modified so as to apply only to rice shipped to Chinese ports lying north of Canton. Earl Granville protested that articles of food are presumptively destined for popular consumption, and that it rests with a belligerent to prove that they are intended for military use. The French Government replied that it was for the prize court, sitting in Paris, to decide upon the legality of the seizure. The British minister protested against the doctrine "that it is for the belligerent to decide what is and what is not contraband of war, regardless of the well-established rights of neutrals." The French Government, in support of its position, cited the arguments used by the English Attorney-General in 1870, with reference to treating coal as contraband of war, while Lord Granville now took the position, then maintained by the French Government, in favor of keeping down the list of contraband articles, and disturbing as little as possible the commerce of neutrals. Another point raised by the British minister was the exemption of vessels that had sailed previous to the announcement by the French Government of the intention to exercise the rights of search and of seizure. M. Ferry contended, on the contrary, that liability to capture accrued at the time of the official announcement.

The blockade of the rice-traffic of the Gulf of Pechili was more injurious to foreign shipping, which is mostly British, than to the Chinese junk trade. Numbers of rice-junks were captured, yet they formed but a small fraction of the total; but no larger vessel could evade the French cruisers.

The Formosa Campaign.—In the beginning of the year, Admiral Courbet was established at Kelung, and was engaged in operating against Tamsui, the capture of which would complete the second blow in the programme of reprisals, to be followed by the occupation of Taiwan and Takow. On Jan. 6 the transport Cholon arrived at Kelung with troops and munitions. Block-houses were built around Kelung, where the French commander was awaiting re-enforcements to advance upon Tamsui. This place was fortified with a fort of concrete mounted with antiquated cannon and an earthwork battery with a single Krupp gun. Gens. Liu-Ming-Chuan and Tsun had in the autumn, besides a body of hill-men or civilized Formosans, some 3,000 Chinese, about the same number of troops as Admiral Courbet landed at Kelung. Subsequently re-enforcements eluded the blockade and joined the Chinese commanders. After the arrival of French re-enforcements Admiral Courbet began the long-deferred advance upon Tamsui. During the period of delay the Chinese had added to their strength a much more than equivalent force, and now greatly outnumbered the French. Between the 10th and the 25th of January the French made five attacks on the Petao forts, situated about four miles from Kelung. Though fighting against double or treble their numbers, the French marines displayed the highest degree of bravery, and inflicted severe losses on the Chinese; but the latter stood their ground valiantly, and finally forced their assailants to retire. After the 1st of February they took the offensive themselves. The French sailors began to murmur against their commanders for needlessly sacrificing their lives in repeated attacks against vastly superior numbers. Their rations, moreover, began to fail, an epidemic of sickness raged among them, and the sick and wounded were obliged to suffer and perish for lack of proper medical relief. At last a mutiny broke out on board the Bayard, and twelve men were shot by sentence of court-martial. Admiral Courbet at this point gave up his plan of operations, and departed for the coast of the mainland to cruise against any Chinese naval vessels that ventured away from the safe refuge of the rivers and the ports, and to capture rice-junks bound for northern China in accordance with the new doctrine of international law that the French Government advanced to suit his purpose. He telegraphed to France that 5,000 fresh troops would be required for the conquest of Formosa. On board the Cachar and the Annamite 1,434 men were sent out, and preparations were made to send 2,500 more. Admiral Courbet left Rear-Admiral Lespès with five of the ships to hold Kelung. The first Chinese attack on the French positions occurred Jan. 31, in the direction of the Kelung mines. The Chinese force, said to number from 1,000 to 2,000, was repelled, leaving 200 dead on the field, including several mandarins and one European. On Feb. 10 the Chinese were again repelled in the attack on the French lines. The blockading squadron, though unable to prevent the landing of troops, munitions, and supplies, patrolled the coast and destroyed great numbers of small craft, carrying off the crews that were not killed to Kelung, where they were forced to work on the earthworks.

The distance between Kelung and Tamsui is only sixteen miles, but the road was exceedingly difficult, lying along the bed of a stream with steep, wooded hill-sides, affording cover for the hill-men, who are good sharp-shooters and expert in jungle warfare, while at many places the Chinese troops were strongly posted.

On the 4th of March Colonel Duchesne, the military commander at Kelung, undertook another attack on the Chinese positions. He advanced with 1,300 men, and after fighting five days carried the last of the Chinese forts on the Tamsui road, forcing the Chinese to fall back upon Tamsui. The French losses were 400, the Chinese losses 1,100 men.

In March the French had 24 war-vessels with 6,000 men in Chinese waters, and 40,000 land-forces in Tonquin and Formosa.

Occupation of the Pescadores Islands.—On the 29th of March Admiral Courbet with a squadron of six ships and several landing companies of troops undertook the occupation of the Pescadores, The operations began with the bombardment of the forts, provided with four batteries, that guarded the entrance to the harbors of Ponghu and Makung. The town of Makung was set on fire. The obstacles in the harbor channel were destroyed. The troops were landed the same day, and on the 30th they marched upon Makung. On the 31st, after a succession of assaults, the fort, which was defended by 2,500 Chinese, was captured, with 14 rifled cannon, a large number of smooth-bore guns, and stores of arms and ammunition. In the three days that the assaults lasted, from 300 to 400 Chinese were slain, while the French loss was small.

The Conclusion of Peace.—The withdrawal of the French demand for indemnity gave the Imperial Government a welcome opportunity to embrace without dishonor the proffered peace. (The history of the negotiations and the terms of the treaty of peace are given in the article on ANNAM.) China, in the improved state of her army and coast defenses, was better able to continue the struggle, notwithstanding the emptiness of the imperial treasury, than was the French Government, taking account of the temper of the French nation, which forbade the expenditure of the military strength of France in colonial adventures. The aristocracy of China, who influenced the counsels of the Tsung-li-Yamen, were the first to grow tired of the conflict, because those of them who were wealthy were mulcted in war contributions now that the imperial treasury was exhausted. The people became more and more inflamed with the spirit of war as the temper of the ruling class grew cooler. The French, demoralized by being pitted against soldiers whose civilization and modes of warfare are different from their own, conducted the reprisals with a ruthlessness not usual in the fiercest military conflicts between European nations. Admiral Courbet, chafing under the inaction to which he was doomed by the decisions of his Government, permitted a barbarous warfare against innocent junkmen and fishermen that horrified the people of Japan and roused the spirit of revenge among the Chinese troops and the people of the seaboard provinces. The Chinese were angry against the English, who aided the French in various ways that were not warranted by international law, although they received similar aid wherever profits could be earned from it. There were, however, in the treaty ports, or even in Formosa, no savage outbreaks against foreigners, such as have occurred in former Chinese wars.

Disturbances in Kashgaria and Ili.—In the province of Ili from 2,000 to 3,000 Chinese soldiers mutinied and killed their officers on the ground that their pay was withheld from them, the governor having kept it, as was alleged, for his own use. Soon afterward, in the beginning of March, Hakim Beg Toreh, the third son of Yakoob Beg, who had been living in Bokhara on a pension of 7,200 rubles, paid by the Ameer, but furnished probably by the Russian Government, left Bokhara on the pretense of assisting exiles from Kashgaria. Accompanied by several hundreds of his expelled countrymen, he proceeded to Kegul, on the Chinese frontier, and from there issued a proclamation, declaring that he had returned with the help of the Czar to deliver his brethren from the yoke of idolaters and to set up in Kashgar the empire of God and his Prophet. Among the acts of tyranny the Chinese Viceroy was said to have been guilty of, was that of compelling Mohammedans to sacrifice pigs to the God of War and to eat their flesh. From Kegul he proceeded to Yarkand, where several thousand insurgents gathered around his banner. The Dungan revolt was not suppressed until April, when the rebels were defeated and dispersed near Shiho.

Foreign Policy. — The effect of the unofficial war with France, though neither power could record a positive success, was to produce in China a sense of national coherence and strength that was lacking before. China prepared herself for a resistance that could be kept up indefinitely, and the French could exhaust all their resources in winning local advantages without vitally injuring an empire so large and rich and populous. The English and other foreign residents of the open ports, who have frequently found their advantage in the arrogant and bullying policy of European governments, were anxious that the Chinese should be kept cowed and intimidated, and that the French should therefore be victorious. The effect of the war on China, was to lead her to seek the aid of European knowledge in developing her material resources and no longer to shun contact with Western civilization. On other nations the effect was to alter materially their estimation of the power of China. Great Britain, when involved in her difficulty with Russia, courted an alliance with China. According to rumor, an offensive and defensive alliance has actually been formed against Russia. From France China expects no further trouble. Li-Hung-Chang has been commissioned to construct a line of fortifications along the southern frontier. Russian encroachments, however, must be guarded against along the entire 3,000 miles of common frontier. The sons of Yakoob Khan menaced Kashgaria; the Kuldja difficulties were renewed in a serious form by a recent outbreak on the Ili frontier; on the side of Manchuria the Russians were preparing to create a complication out of the border troubles that arose from the discovery of gold on the banks of the Tieumen river. The troubles fomented by the Russians in Kashgaria impelled the Imperial Government to accede readily to the appointment of a British consul to reside in Kashgar. In Corea the danger of a virtual Russian protectorate had only been averted by the vigilance and decision of Chinese officials. Mollendorf, the German who guided the foreign policy of Corea, supported a Russian diplomatist in a proposal for a treaty placing the gendarmerie, which is to be established in accordance with the treaty with Japan, under the command of Russian officers, and giving the Russians authority to construct telegraph lines and post-roads in certain parts of the peninsula that were important to them. This treaty the King at the last moment refused to sign. The occupation of Port Hamilton by Great Britain was effected before Sir Henry Parkes broached the subject of an anti-Russian alliance. The occupation was intended to be definite. All the entrances to the harbor, except one, were closed by permanent obstructions; forts were erected, and other measures of defense carried out; and in the summer a large force of marines left Hong-Kong to garrison the place. The establishment of another British naval station off their coast was an unpleasant fact to the Chinese. But, fearing that Russia would take possession, its occupation by Great Britain was, under the circumstances, not unwelcome. The Anglo-Chinese understanding, for which Sir Henry Parkes labored, is said to have been arranged after his death. In the event of an Anglo-Russian war China would render England assistance and facilities, and would strike a simultaneous blow at Russia in the north, with the object of recovering the rich districts east of the Amoor, between the Ussuri and the sea, while in case of fresh Russian aggression upon Chinese territory England would give China in certain ways material aid in a war of defense. In settling the Corean difficulty with Japan, and arranging a definite peace with her eastern neighbor, China prepared the way for a more frank and vigorous policy toward European powers. The Russians, to further their own designs in Corea and the China seas, tried to sow strife between the sister powers, and to stir up Japanese pride and ambition. The counsels of Li-Hung-Chang finally prevailed, and the Imperial Government embraced the chance of concluding an honorable peace with France, and composed the differences with Japan, in order to enter upon the work of preparation, to organize the military resources and defenses of China, so as to enable her to assert herself as one of the great powers of Asia.

The Opium Convention. — The *rapprochement* between England and China cleared away a controversy between the two governments, which the Chinese have looked upon as one of their chief foreign difficulties. The conditions imposed upon China by Great Britain in respect to the importation and taxation of Indian opium prevented the Chinese Government from adopting police measures for the restriction of the use of opium, and diverted to the Indian Government a large part of the revenue that might be collected from the drug. After the murder of Margary in Yunnan in 1876, Sir Thomas Wade drew up the Chefoo convention, in which the area of the treaty ports in which foreign merchandise could circulate without paying *li-kin*, or transit dues. was greatly extended. Great Britain could not obtain the consent of the other powers to any particular limits, and for that reason, and because the provisions with regard to opium were found to be impracticable, the Chefoo convention, signed by Sir Thomas Wade and Li-Hung-Chang, in September, 1876, was never ratified. A new instrument was signed by the Marquis of Salisbury and the Marquis Tseng on July 19, in which all the provisions of the Chefoo convention were repeated, excepting the clauses relating to opium. Under the limitation on the Chinese tariff hitherto in force, China derived but $5,000,000 from the duty on Indian opium, while the Indian Government netted eight times that amount. The new settlement of the opium question was the proposal entirely of the Chinese Government, except in unimportant details. Under the old arrangement opium pays a customs duty of thirty taels per chest. When forwarded from the port of entry into the interior it pays *li-kin*, or transit dues, to the local authorities, and in every district fresh dues are collected. Only a fraction of these taxes reaches the imperial treasury. The new convention with Great Britain provides for the payment to the customs officials, besides the former duty of thirty taels, of eighty taels in lieu of all transit dues. By this arrangement the Chinese Government saves the large sums lost through the extensive system of smuggling at the *li-kin* barriers and through the peculation of the provincial officials, as well as the cost of collection. The importing merchant will not lose, because, although paying nearly four times the former customs duty, he can get a correspondingly higher price from the Chinese merchants, who are relieved of the *li-kin* dues. The Government will establish bonded warehouses for opium, and give a certificate with every package of opium that has paid the duty of 110 taels per chest that will exempt it from all transit dues. Under an arrangement already in force, an importer, by paying a sum equal to half the customs duty, could obtain a transit pass for cotton or other merchandise, but only to a specified place. The Chinese Government agrees in the new convention to levy duties on the home-grown opium, equal *ad valorem* to the eighty taels it imposes on the Indian article after the regular customs duty has been paid. If it is found that the transit certificate does not secure immunity from all local dues, the British Government has the right to withdraw from the agreement. The convention remains in force for four years, and then continues by tacit consent from year to year. A commission is to be appointed to inquire into the best method to stop the large smuggling trade from Hong-Kong that is highly detrimental to the Chinese revenue. This has been another point of difference between Great Britain and China. The British Government would agree to no arrangement that the Chinese authorities proposed to put a stop to the illicit traffic, in which the Hong-Kong merchants found their profit, and consequently the Chinese Government adopted a preventive system so stringent that it was termed "the blockade of Hong-Kong." The agreement, concluded in July, 1885, revives all the provisions of the Chefoo convention, except as modified by the new arrangements respecting the opium-traffic. If the opium agreement should terminate after ratification, through the withdrawal of Great Britain on account of non-fulfillment, or upon twelve months' notice by either party after four years, the other clauses of the Chefoo agreement will still remain in force.

CHOLERA. See ZYMOTIC DISEASES.

COLFAX, SCHUYLER, an American statesman, born in New York city, March 23, 1823; died in Mankato, Minn., Jan. 13, 1885. His grandfather was Gen. William Colfax, who commanded the life-guards of Washington throughout the Revolutionary War. His father died a short time before the son's birth, and his mother some years after married again. His early education and training were obtained in the public schools of the city, which he attended until he was ten years old. The next three years he served in his step-father's store. In 1836 the family emigrated to Indiana, and settled in New Carlisle, St. Joseph's Co. During the five years following he was occupied with the duties of a clerk in a country store. In 1841 his step-father (Matthews) was elected County Auditor, and removed to South Bend. Schuyler was appointed Deputy Auditor, and devoted all his leisure time to reading and the acquisition of knowledge. He also studied law, and for two years was Senate reporter of proceedings for the Indianapolis "State Journal." In 1845 Mr. Colfax established a weekly paper at South Bend, the "St. Joseph Valley Register." Under his management, despite numerous mishaps and business losses, the "Register" became the most influential journal, in support of Whig politics, in that part of Indiana.

At the Whig National Convention held in Baltimore in 1848, he appeared as a delegate, and was appointed secretary. Gen. Zachary Taylor was nominated for President, and this nomination was zealously supported by Colfax. The next year he was elected a member of the convention to revise the Constitution of the State of Indiana, and in his place, both by voice and vote, opposed the clause that prohibited free colored men from settling in that State. He was also offered a nomination for the State Senate, but declined it. In 1851 he was a candidate for Congress, and came very near being elected in a district that was strongly Democratic. The next year he was again a delegate to the Whig National Convention.

Mr. Colfax was elected to Congress in 1854, by the recently formed Republican party, and was re-elected for six terms in succession. In 1856 he supported Fremont for President, and during the canvass made a speech in Congress on the extension of slavery and the aggressions of the slave-power. This speech was used as a campaign document, and over half a million copies were circulated throughout the country. He was chairman of several important committees of Congress, especially that on post-offices and post-roads, and proved an able and active member of the national legislature. In December, 1863, he was elected Speaker of the House of Representatives, and he was twice re-elected, each time with an increased majority. In the spring of 1865 he made an excursion with a party of friends to California, and after his return delivered an interesting lecture entitled “ Across the Continent.”

In May, 1868, the Republican National Convention, assembled in Chicago, nominated on the first ballot Schuyler Colfax for Vice-President of the United States, with Gen. Grant as candidate for President. The Republican ticket was elected by a large majority, and Mr. Colfax took his seat as President of the Senate, March 4, 1869. At the convention held in Philadelphia in 1872, his name was dropped as candidate for Vice-President, Mr. Wilson, of Massachusetts, taking the place with Gen. Grant for the next term. In 1873 he was implicated in charges of corruption brought against certain members of Congress who had received shares of stock in the Crédit Mobilier of America. A long investigation took place, and the Judiciary Committee of the House was directed to inquire whether the evidence taken called for the impeachment of any officer of the Government. This committee reported that there was no ground whatever for the impeachment of Schuyler Colfax, inasmuch as the alleged offense, if committed at all, had been committed before he became Vice-President.

The latter years of Mr. Colfax's life were spent mostly in retirement at his home in Indiana. He took pleasure in delivering public lectures, which he did quite frequently before large audiences. He was also actively engaged in the cause of Odd-Fellowship, and was one of the most useful and valued members of that organization. He was twice married, his second wife being a daughter of Senator Wade, of Ohio. She and one son survive him. His death was caused, as was supposed, by disease of the heart, aggravated by exposure to the intense cold in January. Public honors were paid to his memory both in Congress and in Indiana. His character as a man is regarded by those who knew him intimately as irreproachable.

COLOMBIA, an independent federal republic of South America. The Union is composed of nine States and ten Territories. The names of the States are: Panamá, Cáuca, Antióquia, Bolívar, Magdalena, Santander, Boyacá, Cundinamarca, and Tolima. The Territories are: San Andres, Providencia, Caquetá, Goajira, Nevada, Motilones, Bolívar, Casanare, San Martin, and the Eastern Cordillera. The republic covers an area of 586,600 square miles and has a population of 3,500,000, including 50,000 wild Indians.

Government.—The President of the republic is Don Rafael Nuñez. His Cabinet was composed of the following ministers: Secretary of State and Minister of War, Gen. Campo Serrano; Public Instruction, N. Barrero; Interior, M. Castro; Commerce and Communications, F. Angulo; Finance, J. M. Caro; Foreign Affairs, E. Salgar; Public Works, J. J. Vargas. The formidable insurrection against the Federal Government, which lasted from the beginning of the year till the middle of August, thoroughly disorganized the administration of most of the individual States, each of which had its own President. Only a few of the States remained loyal, and it has become evident that some thorough organic reforms will be necessary to prevent in the future gigantic armed conspiracies against the authority of the nation.

The United States Minister at Bogotá is Mr. Jacobs, and the Colombian Minister at Washington Señor Becerra. The Colombian Consul at New York is Señor C. Calderon, and the American Consul at Panamá Mr. T. Adamson.

Army.—In time of peace the Federal army, previous to the late rebellion, did not exceed 2,000 rank and file; but in future the strength of available forces at the disposal of the General Government will be considerably increased.

Navy.—The absence of all war-steamers, properly speaking, except the Boyacá and a small coasting-steamer on the Atlantic side, necessarily prolonged the civil war. Rather tardily, when the rebellion was about collapsing, the Government purchased the American steam-yacht Utowana in August. This vessel was built by Messrs. John Roach & Sons, at their Chester ship-yard, in 1883. She is an iron, flush-deck, schooner-rigged vessel, of 257 tons. Her dimensions are—length over all, 138 feet; on water-line, 121½ feet; breadth, 20½ feet; depth, 11 feet 7½ inches; draught, 8 feet 2 inches. She is fitted with compound inverted engines, 15-inch high-pressure and 28-inch low-pressure cylinders, 18-inch stroke. She has a horizontal tubular boiler of 100 horse-power, and steams about 14 miles an hour.

Finance. — Considering the population, the magnificent and manifold resources of the country, and its unrivaled geographical position between two oceans, the future highway of commerce, the national indebtedness of Colombia, as it stood early in 1884, was a mere trifle, the total indebtedness, home and foreign, not exceeding at the time $19,911,383. If the country had remained at peace internally, nothing would have been easier, under an economical administration, than to defray the interest thereon and establish a solid credit in the United States and Europe for public works, such as harbor and river improvements, railroads, and telegraphs. Unfortunately, the political conspirators threw back the country at least a decade and compelled the Government in its financial distress to levy forced loans in the interior, and, when the rebellion had collapsed, to confiscate the property of the insurgents so as to indemnify the people at large for the ruin they had caused. These confiscations have raised a nice point of law. Many of the rebels were merchants and held stocks of goods obtained abroad but not yet paid for. The Colombian laws consider all the stock a merchant holds his property, whether paid for or not; and thus large amounts of goods have been seized and sold for Government account which, from a commercially legal point of view, were still English or American property, because sold on credit and not paid for. This being the case, all merchants residing abroad and selling goods to Colombians on credit are advised to put a clause into their invoices with the reservation, *Propiedad reservada hasta el pago* ("property reserved till paid for"), which, according to section 750 of the Colombian Statute-Book, exempts such property from seizure during or in consequence of political troubles. The annual income and expenditure of the Federal Government in time of internal peace, and before the late rising, was about $6,000,000 per annum.

Railroads.—There were, besides the Panama Railway, in 1884, the following lines in operation: Sabanilla-Barranquilla, 28 kilometres; Cucuta-Villamizar, 36; Buena Ventura-Córdoba, 20; Puerto Barrio-Zabaletas, 32½; Jirardot-Tocaima, 29, and Honda-Magdalena, 5. Adding thereto the 75 kilometres across the Isthmus, we arrive at a total not exceeding 225 kilometres, or 142 miles.

Telegraphs.—The length of lines in operation in 1883 was 3,771 kilometres, and the number of messages forwarded, 288,876.

Commerce.—The total foreign trade of the republic was as follows:

YEAR.	Imports.	Exports.
1882-'83	$11,504,028	$14,857,170
1881-'82	12,355,555	18,514,116
1880-'81	12,071,480	15,836,944
1879-'80	10,387,003	13,804,981

IMPORTS INTO COLOMBIA FROM:

YEAR.	United States.	England.	France.
1881	$5,991,890	$6,677.505	$5,016,006
1882	4,961,470	5,452.281	5,898,696
1883	5,171,455	3,809,798	4,188,336

EXPORTS FROM COLOMBIA TO:

YEAR.	United States.	England.	France.
1881	$5,383,138	$5,999.776	$6,214.345
1882	6,408.346	5,296,660	5,959,346
1883	6,868,971	6,099,414	5,984,352

AMERICAN TRADE WITH COLOMBIA.

FISCAL YEAR.	Imports from Colombia into the United States.	Domestic exports from the United States to Colombia.
1885	$2,342,077	$5,397,412
1884	3,891.843	6,174,574
1883	5,171,455	6,719,787

The foregoing statement shows the sudden decline that American trade with Colombia experienced in consequence of the political disturbances.

There entered Colombian ports in 1883, altogether, 923 sailing-vessels, of a total tonnage of 40,462, and 588 steamers, aggregating 668,713 tons.

The Panama Canal.—The report of American naval officers on the condition and prospects of the Panama Canal, published in April, 1885, clearly showed that the canal could not be completed within the time originally set, nor at anything near the estimated cost. When the company was formed it was calculated that the amount of excavation to be made would be 75,000,000 cubic metres. In March, 1885, it was officially stated at 111,000,000, and the Director-General of the work expressed the opinion that it would be 120,000,000. The estimates of cost were much further out of the way. The limit set was 600,000,000 francs, or $120,000,000. A vast amount had been expended in preparations. The outlay already made in April, 1885, was $74,000,000, and less than one tenth of the excavation had been made. The uncompleted contracts would call for an expenditure of more than $50,000,000. The parts not yet contracted for would, according to Lieut. McLean, call for over $50,000,000 more. This took no account of the great Gamboa dam, the cost of which is estimated at $20,000,000. This is of itself a gigantic project, the difficulty of which has not been accurately calculated, and the cost of which will unquestionably far exeeed the estimate, even if it can be successfully carried out. Lieut. McLean, who shows an inclination to be careful in his calculations, expresses the belief that the total cost of the canal, even if the work does not extend far beyond the limit of time set by the managers of the company, will not fall below $350,000,000. The condition of the work, the appliances on hand and in expectation, the force employed and likely to be employed, indicate, from the report alluded to, that the enterprise could, if ample funds were at command, be carried to completion in less than five years from April, 1885. But the financial element in the problem is the most important. The company secured its original subscriptions to stock by estimates that have already proved fallacious, by the most glowing representations and promises, and by the payment of interest at 5 per cent. on the shares during the progress of the work. Further funds to be raised by the issue of bonds will bear interest; and long before an income can be counted upon, the company will be carrying a load of interest amounting to millions of dollars a year.

Two interesting questions were raised at the time by the financial outlook. Can the money necessary to complete this vast enterprise be raised on the credit of the company? Is there any probability that the business of an interoceanic canal at Panama will pay a profit on the enormous investment? One of the numerous experts employed to work up the scheme in Paris in 1880 calculated on a traffic of 5,000,000 tons, and 15 francs a ton for transit was thought low enough to attract vessels to the Isthmus route. This would give a revenue of 75,000,000 francs. Five per cent. would go to the Colombian Government, and the cost of management was estimated at 6,000,000 francs. This would take out nearly 10,000,000, leaving still a liberal dividend for the amount of obligations originally contemplated, placed by the writer mentioned at 800,000,000 francs. But it is likely to be at least double the amount.

A series of articles relating to the canal, which originally appeared in the London "Financial News," was published in the summer in a volume of 248 pages. The author is Dr. J. C. Rodrigues, who states that the amount of earth removed has at no time even approximately reached 2,000,000 cubic metres per month, but has, on the contrary, never exceeded 800,000 cubic metres, and that in May, 1885, it was not over 12,376,000 cubic metres altogether. Meanwhile, the amount to be removed had swelled in an astonishing manner. In the beginning M. de Lesseps estimated it at 46,000,000 cubic metres; later at 75,000,000; now the engineers estimate it to be 120,000,000. He adds that at the time of his report only about one-tenth of the work to be done had been performed, and this the easiest, in the alluvial plain, where the gigantic dredges could find full play; whereas the cuts, and especially the controlling of the Chagres river, will present extraordinary difficulties to be overcome. Mr. Rodrigues remarks that in the beginning M. de Lesseps estimated the cost of the canal at 658,000,000 francs, that he subsequently even lowered his estimate to 530,000,000 francs, while the International Committee fixed it in 1880 at 843,000,000 francs; that so far shareholders have been assessed 147,500,000 francs; that the loan of 1882 amounted to 125,000,000, that of 1883 to 300,000,000, and that of 1884 to 193,700,000, together 766,200,000 francs; and that now a lottery loan of 600,000,000 francs is to be floated.

The following statements concerning the financial situation of the company and the progress of the work are extracted from the annual report of M. Ferdinand de Lesseps and the board of managers submitted to the shareholders of the company at their general meeting at Paris on July 29, 1885.

The general inventory on June 30, 1884, showed the ensuing items:

ASSETS.	Francs.
Expenditure for work proper on the canal	183,845,427
Real estate, material, and furniture	75,639,413
Panama Railroad shares	93,878,225
Assessments that may be called in on shares	147,500,000
Cash and due the company	120,963,953
Total	621,827,018
LIABILITIES.	
Outstanding shares	300,000,000
Outstanding bonds	280,375,000
Various creditors	26,809,155
Sundries	14,642,863
Total	621,827,018

It was furthermore stated that on June 30, 1883, the available assets represented a sum of 187,946,434 francs; that during the ensuing twelve months 60,000 3 per cent. bonds were sold on Oct. 3, 1883, producing 171,000,000 francs; and that the resources from other items reached 7,362,103 francs, constituting an aggregate amount of 366,308,536 francs. The expenditure for administration and the work done at Panama reached 73,098,679 francs, while purchase of material cost 52,201,194—together, 125,299,873 francs. The available balance on June 30, 1884, was consequently 241,008,664 francs, but this amount included the 147,500,000 francs of assessments to which shares are liable, but which had not been called in. Deducting these, there were 93,508,664 francs of assets actually realized. Since the company was formed, and up to June 30, 1884, the expenditure was altogether 354,009,199 francs for the following items: (1) 93,878,225 francs' worth of Panama Railway shares, which produced during the fiscal year 5,708,882 francs; (2) 75,639,413 francs spent for real estate in Paris and Panama; (3) 184,491,561 francs outlay for administration and work on the Isthmus.

M. de Lesseps maintains the figure of excavation at 120,000,000 cubic metres. He has made a contract for the removal of 62,691,595 cubic metres for the sum of 219,295,974 francs, and contracts with two other parties who will excavate the remainder for a payment of 480,000,000 francs. The report recommends that a 600,000,000-francs loan be made through the issue of lottery bonds, of which a certain amount is to be drawn for every year, the lucky numbers to obtain premiums. A portion of the French financial press subjected the report to severe criticism, urged the calling in of the assessments on shares due, and condemned the lottery form of the proposed loan. Both shares and bonds suffered a serious decline on the Paris Stock Exchange.

In September Señor de Harola, a Mexican engineer, sent to the Isthmus to report to the Government at Mexico, acknowledged the energy and science of the French engineers, and expressed confidence in their success.

When in the autumn unfavorable rumors had been spread in financial circles in New York with reference to the progress of work on the canal, they were emphatically denied by Mr. C. Colné, secretary of the American commission, who declared that work on the canal had not been stopped, but was progressing as rapidly as ever along the entire line of the canal. Seven dredges were being operated by a New York firm, and another American firm had just made a contract for dredging 8,000,000 cubic yards on the Pacific side. Besides, an Anglo-Dutch company had taken a contract for 25,000,000 cubic yards at Culebra, the highest cut of the canal. The chief engineer of the canal had just gone to Paris to perfect the plan of operations for next year, and to superintend the shipment of a large quantity of machinery. The ensuing statement was made on Dec. 11 by officials of the company at Panama: "Operations are under way on two thirds of the entire length of the proposed canal. The other third will be the easiest of all to excavate, as it is composed of soft earth only. Preparations are being made for beginning work in this section, and the erection of machinery is now in progress. The company has just completed a contract for the excavation of all that portion which lies in the high Chagres valley. The price stipulated for the work varies according to the nature of the material to be excavated. The lowest amount is thirty-four centimes per cubic metre, the highest two dollars and fifty centimes, Colombian silver. The latter price is to be paid only for the excavation of rock that lies nine metres below sea-level. The average price of excavation under this contract will probably not exceed one dollar per cubic metre, as rock appears in this portion of the route only by way of exception. Excavations are in progress along the line of the canal proper, and also for changing the obstructive water-courses. The amount of machinery in use is considerable, and is constantly increasing. If the excavators in practice prove to possess only one fourth the power they have displayed when on trial, they will be sufficient to excavate the bulk of the Culebra section in less than three years. The company and the engineers are straining every nerve to bring the work to a speedy conclusion. The number of laborers now employed is 12,000, and it is the purpose of the company to double this number during the dry season. Work will then proceed upon all sections. The inundations of Chagres river this season have caused only slight damage to the work in progress. The number of canal officials, contractors and the like, is between 800 and 900. There are in the hospitals at Panama and Colon about 450 canal employés. This is not far from 3 per cent. of the whole number employed on the canal, and is not considered an excessive proportion. In spite of the extraordinary rains and freshets of Chagres river, during November the excavations amounted to 700,000 cubic metres."

Panama Railway.—Since Aug. 14, 1884, the company has been running thirty-four trains over the line daily, as long as the transit remained undisturbed by the local political troubles, and after these had ceased the daily number of trains was to be raised to forty. The traffic over the line has been as follows:

YEAR.	Freight.	Passengers.	Earnings.
	Tons.		
1879..........	161,743	23,729	$2,156,367
1881..........	168,645	52,113	2,371,369
1883..........	215,727	80,324	2,811,984

Emeralds.—In the celebrated Muzo emerald-mines, at Boyacá, an emerald was found in December, 1884, weighing in the rough over one pound. This splendid specimen was believed to be the largest ever discovered.

Events of 1885.—The attempt to overthrow the constitutional government in Colombia spread in January to five States. What appeared most threatening was the speedy occupation of the lower Magdalena, of the ports of Baranquilla, Sabanilla, and Colon-Aspinwall on the Atlantic, and Buenaventura and Panama on the Pacific, by the rebels. Cartagena, held by the Government troops, was besieged by the rebels, but the assaults upon it were repelled with great loss to the assailants. But for the loyalty of the few able generals, the timely interference of the United States naval forces on both sides of the Isthmus, and the landing of marines for the protection of American citizens and property, the revolution might have proved successful, the finances of the Colombian Government being crippled by the loss of revenue. While American intervention at Panama counteracted and discouraged the rebel Gen. Aizpuru, and enabled the loyal forces to recapture Buenaventura in the State of Cauca, and then use the only steamer at their disposal to land troops at Panama, the burning of Colon-Aspinwall, by the rebel Prestan, toward the close of March, could not be prevented. Meanwhile the Colombian Government had declared Baranquilla and Sabanilla blockaded, but, as it was a mere paper blockade, the American Government protested. After a desultory warfare in the interior, the main bodies of the contending forces came to a decisive encounter at Calamar on July 1, in which the rebels, though not defeated outright, were so crippled that this engagement proved the finishing stroke, its importance being enhanced by the capture of the river flotilla of the rebels on the Magdalena. In August all the leading chiefs in arms against the Government surrendered, and on Sept. 5 an extra number of the "Gaceta Oficial" was issued by order of Gen. Montoya, at Panama, announcing the restoration of peace.

In November trouble was again apprehended on the Isthmus, on account of the contemplated creation of certain custom-houses, a very unpopular measure, and the American Government felt called upon to re-enforce the North Atlantic squadron in Colombian waters.

COLORADO. State Government.—The following were the State officers during the year: Governor, Benjamin H. Eaton, Republican; Lieutenant-Governor, Peter W. Breene; Secretary of State, Melvin Edwards; Treasurer, George R. Swallow; Auditor, Hiram A. Spruance; Attorney-General, Theodore H. Thomas; Superintendent of Public Instruction, Leonidas S. Cornell; State Engineer, E. S. Nettleton; Railroad Commissioner, William B. Felker; Forest Commissioner, E. T. Ensign. Supreme Court: Chief-Justice, William E. Beck; Associates, Joseph C. Helm and W. F. Stone.

Legislative Session.—The Legislature met on Jan. 7 and adjourned in April. Henry M. Teller, Republican, was chosen United States Senator. Among the acts of the session were the following:

Concerning apprentices.

Creating the county of Archuleta from the western portion of Conejos, with county-seat at Pagosa Springs.

In relation to assignments for the benefit of creditors.

To provide for the punishment of a person receiving deposits in or creating indebtedness by any bank or banking institution, with knowledge of the insolvency thereof.

In relation to banks, bankers, and banking, restricting loans, etc.

To provide for the erection of a State Capitol building at Denver.

Providing for a census of the State to be taken on the 1st of June.

Consolidating and revising the charter and amendments of Denver.

To prevent and punish wrongs to children.

Concerning referees appointed by courts of record, and the practice before them.

To protect all citizens in their civil rights.

Submitting to the people at the next general election for members of the Legislature several amendments to the judiciary article of the Constitution.

To provide for the amendment of articles of incorporation, except of railroad companies.

To provide for the punishment of persons guilty of a willful, malicious, or negligent use of fire.

To punish the commission of willful trespass upon dams, dikes, or embankments upon improved or inclosed lands.

To punish seduction as a crime.

To punish the fraudulent giving of checks or drafts upon banks.

To punish as a crime the enticing of unmarried females under twenty years of age to dance-houses, etc.

Concerning offenses against public morality.

To prevent injury to eaves.

To prevent the sale of intoxicating or malt liquors to minors or habitual drunkards, and to prevent their frequenting saloons, houses of ill-fame, etc.

Relative to contested elections.

Repealing the act of 1883 regulating primary elections.

To provide for the appointment of guardians of non-resident minors.

Declaring that shareholders in banks, savings-banks, trust, deposit, and security associations shall be held individually responsible for debts, contracts, and engagements of said associations in double the amount of the par value of the stock owned by them.

Making it a misdemeanor to destroy or remove any fence or covering erected around or over shafts or other openings upon mining claims.

To regulate the manufacture and sale of oleomargarine, etc.

For the preservation of the health of females employed in manufacturing, mechanical, and mercantile establishments.

Creating a Forest Commissioner for the State.

Creating a Railroad Commissioner.

To provide a system of recording grants.

To prevent the introduction of infectious or contagious diseases among the cattle and horses of the State.

In relation to appeals to the Supreme Court, and the jurisdiction thereof. To facilitate the construction of telegraph, telephone, and electric light lines.

Railroad Assessment.—The assessed value of railroad property in 1884 was $19,923,425.05. Of broad-gauge road, there were assessed 1,294 miles of main and 117½ miles of side track; of narrow-gauge, 1,599 miles of main and 245 miles of side track.

Education.—The public-school system of the State consists of ungraded district schools, town and city graded schools, with high-school courses; the University at Boulder; the School of Mines at Golden; the Agricultural College at Fort Collins; and the Mute and Blind Institute at Colorado Springs. There is a State Industrial School (Reform School for Boys) at Golden. The State University has in operation a preparatory, a normal, a classical, a scientific, and a medical department.

The Constitution of the State provides "that no person shall be denied the right to vote at any school-district election, or to hold any school-district office, on account of sex."

No district is entitled to any portion of the State or county fund unless it maintains a school, taught by a licensed teacher, for at least sixty days in each year. In the country districts, schools are maintained from 60 to 150 days, sometimes prolonged even to 200 days. In cities and towns the schools are from 120 (in a few) to 200 days in length; those in which is enrolled a majority of the pupils of graded schools are in session at least 190 days; while those in which is enrolled a majority of the pupils of ungraded schools are in session about 100 days. A tax of one fifth of one mill is levied by the State for the support of each of the three higher institutions (the University, Agricultural College, and School of Mines).

The public-school revenue is derived almost exclusively from taxation. In common with other new Western States, Colorado has a land grant of sections sixteen and thirty-six in each surveyed township, but so large a portion of these fall upon arid lands that the grant is of little aid to the school fund. The statute provides for the annual levy of a county tax for school purposes of not less than two nor more than five mills; this, with the proceeds of penal fines, constitutes the county school fund. To this is added whatever may be received from the State fund. The State fund will be materially increased hereafter by the amount received from the Insurance Department. School districts may tax themselves for maintenance or building purposes.

The amount of the State school fund, on Nov. 30, 1884, was $114,220. This is kept invested in State warrants at 6 per cent. interest. This interest, and the rental from leased lands, is distributed semi-annually to the counties that have made a legal report for the preceding year, per capita of school population.

The following is a summary of school statistics for two years:

DESCRIPTION.	1883.	1884.	Increase.
Males of school age.....	26,869	28,433	1,564
Females of school age..	26,557	27,809	1,252
Total school population.	53,426	56,242	2,816
Average daily attendance................	23,008	23,307	229
Per cent. of school population enrolled........	68	70	2
Number of school-houses	459	525	66
Value of property......	$1,551,080	$1,676,130	$125,050
Male teachers in graded schools..............	51	66	15
Female teachers in graded schools.......	295	317	52
Expended for teachers' wages................	$367,356	$432,255	$64,899
Expended for current expenses	$117,194	$140,322	$23,128
Expended for buildings, etc.	$267.611	$237,321	Dec. $30.290
Total expenditure......	$1,744,280	$809,898	Dec. $934,382

A State census was taken this year. The following table shows the population by counties, and the mortality for the census year ending May 31, 1885:

COUNTIES.	Population.	Deaths.	REMARKS.
Arapahoe...	61,491	412	
Archuleta...	587	4	Taken from Conejos Co. in 1885.
Bent..	2,903	28	
Boulder....	10,841	93	
Chaffee.....	6,107	11	
Clear Creek.	7,157	88	
Conejos.....	6,687	7	Part to Archuleta Co. in 1885.
Costilla.....	3,129	22	
Custer......	4,219	25	
Delta.......	1,547	12	Taken from Gunnison Co. in 1883.
Dolores.....	834	2	Taken from San Juan Co. in 1881.
Douglas....	2,100	20	
Eagle.......	1,415	10	Taken from Summit Co. in 1883.
Elbert.......	1,576	10	
El Paso.....	8,356	87	
Fremont....	6,601	48	
Garfield.....	1,389	6	
Gilpin.......	6,045	77	
Grand......	1,223	10	
Gunnison...	4,452	16	Part to Delta, Mesa, and Montrose Counties in 1883.
Hinsdale....	879	10	
Huerfano...	5,055	86	
Jefferson...	6,759	58	
Lake.......	16,763	348	Part to Pitkin Co. in 1883.
La Plata....	4,495	27	
Larimer.....	7,583	83	
Las Animas.	10,840	143	
Mesa.......	1,991	25	Taken from Gunnison Co. in 1883.
Montrose...	2,384	39	Taken from Gunnison Co. in 1883.
Ouray......	2,587	13	Part to San Miguel Co. in 1883.
Park.......	3,437	37	
Pitkin......	4,484	31	Taken from Lake Co. in 1881.
Pueblo. ...	16,026	112	
Rio Grande.	3,056	32	
Roult.......	754	6	
Saguache...	2,963	34	
San Juan...	1,987	8	
San Miguel.	1,214	7	Taken from Ouray Co. in 1883.
Summit....	2,548	31	
Weld	9,446.	71	
Total.....	243,910	2,089	

The total population in 1880 was 194,327; gain in five years, 49,583, or over 25 per cent.

Mining.—A Denver journal, near the close of the year, makes the following statement relative to the mining interests of the State: "The Colorado output of precious metals for 1885 will exceed that of 1884. The low price of lead reduced the production of silver-lead ores very materially the first half of the year, and this, together with the sharp competition between the valley and Leadville smelters, kept many of the Leadville stacks out of blast for a lengthened period; but, notwithstanding these drawbacks, Leadville will show little shrinkage in the gross yield of her mines. To compensate for losses, the ore of the Carbonate Camp has in many instances greatly enhanced in value, and especially in gold contents. Iron-ore has been marketed in enormous quantities, and many new producers have been added to the list of shippers. Pitkin County side-line controversies have retarded production, but still there will be a large increase of totals over last year. Summit County will show large gains in gold from placer operations and the stamp-mills erected there during the year. Park County will double its output, owing to the heavy shipments of the Sovereign mine and renewed activity in placer and stamp-mill operations. The San Juan country will give immense additions to last year's large yield, especially from Red Mountain mines and San Miguel properties. Gilpin, Clear Creek, and Boulder Counties will also show steady gains, so that the entire yield of the State will closely approximate that of 1883."

Political.—The only general election in the State was for Justice of the Supreme Court. This occurred on Nov. 3, and resulted in the success of Samuel H. Elbert, the Republican candidate, over Judge Stone, Democrat.

COMMERCE AND NAVIGATION, AMERICAN. The aggregate volume of the foreign commerce of the United States in the year ending June 30, 1885, was, exclusive of the movement of coin and bullion, $1,319,651,739, against $1,408,211,302 in 1884, $1,547,020,316 in 1883, and $1,475,181,831 in 1882. The annual values of the exports and imports of merchandise for ten years are exhibited in the following table:

YEAR.	Imports.	Domestic exports.	Foreign exports.
1876...............	$460,741,190	$525,582,247	$14,802.424
1877...............	451,323,126	589,670,224	12,804.996
1878...............	437,051,532	680,709.268	14,156,498
1879...............	445,777,775	698,340,790	12,098,651
1880...............	667,954,746	823,946,353	11,692,305
1881...............	642,664,628	883.925,947	18,451.399
1882...............	724.639,574	783.239,732	17,302,525
1883...............	723.180,914	804,223,632	19,615,770
1884...............	667,697,693	724,964,852	15,548,757
1885...............	577,476,850	726,668,080	15,506,809

The total value of gold and silver coin and bullion imported and exported, and the annual net exports or imports of specie, were as follow:

YEAR.	Exports.	Imports.	Excess of exports.
1876...............	$56,506,302	$15,936.681	$40,569,621
1877...............	56,162,237	40,774,414	15.387,823
1878...............	33,740,125	29,821,314	3,918,811
1879...............	24.997,441	20.296,000	4,701,441
1880...............	17,142,919	93,034,310	75 891,391*
1881...............	19,406,847	110,575,497	91,168.650*
1882...............	49.417,479	42,472,390	6,945,089
1883...............	31,820,833	28,489,391	3,330,942
1884...............	67,133,383	37,426,262	29.707,121
1885...............	42,231,525	43,242,323	1,010,798*

* Excess of imports.

The total value of imports exempt from duty in 1884–'85 was $193,181,073, as compared with $209,884,184 in 1883–'84. The value of articles admitted free of duty under the reciprocity treaty with the Hawaiian Islands, included in the above, was $8,673,581 in 1885, as compared with $7,748,317 in the preceding fiscal year. The total value of imports subject to duty in 1885 was $384,295,777 during 1884–'85, against $457,813,509 during the year preceding. Of the total value of imports for 1885, those entered for immediate consumption are represented by $455,309,615, against $490,882,867 in 1884; those entered for warehouse by $122,167,235, against $148,912,934. In 1884, imports valued at $27,901,892 were entered for immediate transportation to interior ports, without appraisement; in 1885 the imports entered direct from foreign countries were valued at $551,814,887; those entered through exterior ports without appraisement at $25,661,963. The value of imports brought in cars and other land-vehicles was $21,146,585, against $20,140,294 in 1884; brought in American steam-vessels $54,162,336, against $60,995,710; in American sailing-vessels $58,663,925, against $74,050,497; in foreign steam-vessels $381,212,388, against $435,366,768; in foreign sailing-vessels $62,291,616, against $77,144,424.

Of the total exports of domestic merchandise in 1885, articles of the value of $21,103,207 were carried in cars and other land-vehicles, against $22,444,040 in 1884; $33,127,950 in American steam-vessels, against $41,477,897; $45,678,871 in American sailing-vessels, against $54,558,857; $485,735,372 in foreign steam-vessels, against $468,074,068; $141,022,680 in foreign sailing-vessels, against $138,409,990. Of the total exports of foreign merchandise, $2,992,290 was the value of merchandise exported overland in cars and other vehicles, against $4,129,743 in 1884; $2,451,575 of the exports in American steamers, against $1,523,996 in 1884; $828,464 of the exports in American sailing-vessels, against $1,092,078; $8,293,654 of the exports in foreign steamers, against $8,003,981; and $940,826 of the exports in foreign sailing-vessels, against $798,968. Of the total foreign exports, the articles shipped from warehouse were valued at $7,024,267, and the articles not shipped from warehouse at $8,482,542, against the sums of $6,900,172 and $8,648,585, respectively, in 1884. The value of imported merchandise remaining in warehouse on June 30, 1885, was $33,288,460, against $418,665,692, on June 30, 1884.

The values of the total exports of merchandise, domestic and foreign, for each month of 1884–'85, compared with the monthly movement of the preceding year, were as follow:

MONTHS.	1884–'85.	1883–'84.
July	$54,612,492	$52,884,084
August	54,203,524	61,426,749
September	55,229,490	54,471,252
October	71,659,582	72,608,813
November	78,804,670	79,998,783
December	91,344,155	75,611,418
January	80,532,584	73,989,607
February	53,940,422	61,246,626
March	51,398,266	56,210,454
April	52,969,672	49,893,564
May	49,011,878	48,841,687
June	48,468,154	53,330,577
Total	$742,174,889	$740,513,609

The excess of exports for the twelve months of 1884–'85 was $164,698,039, as compared with $72,815,916 for 1883–'84. Including shipments of coin and bullion, there was an excess of exports amounting to $163,687,241 in 1884–'85, against $102,523,037 in 1883–'84.

The Movement of Specie.—In 1883–'84 there was a monthly excess of specie imports up to December, 1883. In that month an export movement began that reduced the net importation, amounting to $8,392,874 on the 1st of December to nothing in March, and at the end of that month left a net excess of exports of $9,831,909, which was increased to $28,914,025 in April, and $30,913,637 in May, and then reduced by an excess of imports in June to $29,707,121 at the end of the year. The import movement continued in 1884–'85, with the exception of a small excess of exports in September, up to the close of November, when the net imports from the 1st of July amounted to $10,567,837. In December, 1884, an outward movement began again, which continued to the close of the fiscal year, reducing the net importation for the entire year to $1,010,798. The shipments each way of coin and bullion for each particular month of 1884–'85 were as follow:

MONTHS.	Exports.	Imports.
July	$3,019,764	$3,488,121
August	2,674,774	4,006,457
September	3,407,392	2,482,117
October	2,766,185	5,194,538
November	2,293,430	9,558,149
December	4,092,083	3,803,289
January	3,674,953	3,167,993
February	4,143,310	2,892,044
March	3,951,921	3,592,503
April	4,295,550	2,721,557
May	3,553,824	1,201,979
June	4,358,339	1,133,576
Total	$42,231,525	$43,242,323

Of the total imports of coin and bullion during the twelve months ending June 30, 1885, $26,691,696 consisted of gold, against $22,831,317 in 1884, and $16,550,627 of silver, against $14,594,945. The gold imports were made up of $8,849,237 of bullion, against $4,997,571 in 1884; $3,352,090 of American gold coin, against $3,824,962; and $14,490,369 of foreign gold coin, against $14,008,784. Of the total imports of silver, $4,530,384 were of bullion, against $2,910,451 in 1884; $673,926 of American coin, against $686,182; and $11,346,317 of foreign coin, against $10,998,312. The exports of foreign gold for the twelve months were $5,736,333, consisting entirely of foreign gold coin, against $5,787,753 in 1884, consisting of $5,785,353 of foreign coin and $2,400 of bullion. The exports of foreign silver coin and bullion, in 1885, amounted to $12,119,082, against $11,119,995 in 1884, and consisted of $12,060,612 of foreign coin and $58,470 of bullion, against $10,625,755 and $494,240 respectively. The exports of domestic gold and silver amounted to $24,376,110 in 1885, against $50,225,635 in 1884. The exports of domestic gold were $2,741,559 in amount, against $35,294,204 in 1884, and consisted of $307,772 in bars of the Mint or Assay-Office, against $22,961,856, $87,978 in other bullion, against $90,327, and $2,345,809 in coin of the United States, against $12,242,021. The exports of domestic silver amounted to $21,634,551 in 1885, against $14,-

931,431, and comprised $1,547,400 in Mint or Assay-Office bars, against $7,522,671 in 1884, $18,875,524 in other bullion, against $6,718,379, $1,073,150 in trade-dollars, against $225,500, and $138,477 in other American coin, against $464,881.

Imports.—A further decline in the import trade, in sympathy with the diminished demand for American products in Europe, is noted in 1885. An arrest of borrowings in the European money-market, and the cessation of the momentary impulse for railroad construction that started in 1884, account for a part of the decrease, and a continued declension in the average prices explains a part. A diminished consumptive capacity, resulting from the falling off in the national income through sinking prices and contracted trade, is revealed in a diminution of the imports of many articles of luxury and consumption, in quantities as well as in values. The decrease due to this cause is not, however, general, nor is the average decrease in quantities very marked. In some raw materials there was a considerable decrease in quantities, but in many kinds there was an increased importation, showing an increased demand in various branches of the textile, metal, and chemical industries, with a net result not varying greatly from that of the previous year.

The quantities, when given in the reports of the Bureau of Statistics, and the values of the specific articles of merchandise imported into the United States in 1884–'85, compared with the importations of the foregoing year, are exhibited in the following table:

ARTICLES.	QUANTITIES.		VALUES.	
	1885.	1884.	1885.	1884.
FREE OF DUTY:				
Animals:				
Cattle ... No..	26,166	41,021	$1,177,335	$2,309,950
Horses ... No..	18,494	18,271	1,916,874	2,212,591
Sheep ... No..	5,492	4,427	37,257	74,558
All other ...	...	...	244,108	533,549
Products of the United States returned ...	...	...	6,638,214	6,138,960
Paintings, etc., of American artists ...	...	...	372,021	361,403
Asphaltum or bitumen, crude ... lbs..	37,646,930	72,076,408	97,602	145,571
Bark, hemlock ... cords..	72,933	78,248	347,944	406,278
Bolting-cloths ...	...	...	287,076	396,153
Books, etc. ...	...	...	785,699	802,785
Chemicals, drugs, and dyes:				
Alizarine ... lbs..	1,470,864	669,548	404,002	239,917
Argal, or crude tartar ... lbs..	17,694,336	19,591,039	2,950,561	3,265,315
Bark, cinchona, etc. ... lbs..	3,513,391	2,580,052	914,908	717,614
Cochineal ... lbs..	783,382	681,996	206,802	150,858
Logwood ... tons..	56,231	55,987	904,237	876,695
Other dyewood in sticks ...	...	...	270,946	320,824
Gum-arabic ... lbs..	1,395,117	3,638,178	301,284	534,042
Crude camphor ... lbs..	2,223,038	2,047,732	211,834	224,313
Cutch and gambia ... lbs..	20,457,336	22,267,931	875,000	1,148,690
Shellac ... lbs..	3,468,891	2,865,753	505,724	546,375
Other gums and resins ... lbs..	16,004,328	14,782,099	1,952,763	1,946,746
Indigo ... lbs..	3,034,650	2,645,825	2,004.869	2,254,044
Chloride of lime ... lbs..	94,697,816	99,758,375	1,453,930	1,681,114
Licorice-root ... lbs..	26,406,008	39,056,653	559,766	799.454
Mineral waters, natural ... gals..	1,644,458	1,526,011	398,871	359,021
Potash, muriate of ... lbs..	40,617,944	48,706,014	610,947	731.332
Quinia, sulphate of, etc. ... oz..	1,871,600	1,571,082	1,513,803	1,774,925
Soda, nitrate of ... lbs..	111,804,135	121,202,792	1,696,054	1,983,376
Sulphur, crude ... tons..	96,841	105,143	1,941,943	2,242.678
Vanilla beans ... lbs..	97,094	75,621	412,678	357,821
All other drugs, etc. ...	...	...	3,206,413	3,313,659
Cocoa, crude ... lbs..	10,300,120	12.235,304	1.332,390	1,644.766
Coffee ... lbs..	572,599,552	534,785,542	46,723,318	49,686,705
Cork-bark ...	...	...	880,954	739,986
Cotton, unmanufactured ... lbs..	5,115,680	7,019,492	954,760	1,379,850
Diamonds, rough ...	...	...	383,205	391,063
Eggs ... doz..	16,098,450	16,487,204	2,476,672	2,677,360
Farinaceous substances ...	...	...	595,441	597,133
Fertilizers:				
Guano ... tons..	19,583	27,652	391,789	585,984
Phosphates ... tons..	24,114	21,910	288,349	243,843
All other ...	...	...	815,052	935,620
Fish:				
Fresh, except salmon ... lbs..	17,832,031	17,521,419	575,347	578,084
Cod, haddock, etc., smoked and pickled ... lbs..	32,739,828	26,219,592	945,280	962,376
Herring, dried ... lbs..	10,218,065	8,726,479	130,138	139,340
Herring, pickled ... bbls..	105,742	126,519	314,183	492,461
Lobsters, canned or preserved ...	...	...	429,700	274,022
Mackerel, pickled ... bbls..	91,680	88,215	698,822	873,567
Salmon, fresh ... lbs..	1,336,541	1,016,937	152,822	119,650
Salmon, pickled ... bbls..	5,872	6,408	75,989	100,562
All other ...	...	...	128,149	186,194
Fruits, nuts, etc.:				
Bananas ...	...	...	2,095,224	1,820,178
Cocoanuts ...	...	...	714,512	747,280
All other ...	...	...	906,655	874.615
Furs and fur-skins, undressed ...	...	...	1,829,942	2,528.576
Hair ...	...	...	1,558,014	1,888,912

ARTICLES.	QUANTITIES.		VALUES.	
	1885.	1884.	1885.	1884.
Goat-skins	....	....	$4,197,376	$5,157,198
All other hides and skins	....	....	16,388,904	17,193,708
Personal effects of immigrants	....	....	2,168,711	2,249,172
India-rubber and gutta-percha, crude ... lbs..	24,208,148	24,574,025	9,095,256	13,736,004
Ivory:				
Animal ... lbs..	156,624	220,879	498,816	726,650
Vegetable ... lbs..	8,301,421	7,891,952	194,046	241,243
Oils:				
Fixed or expressed ... lbs..	22,493,849	12,869,838	1,289,860	734,189
Volatile or essential ... lbs..	1,151,690	959,032	835,629	989,647
Whale and fish ... gals..	224,030	429,561	220,168	243,209
Rags, other than woolen ... lbs..	134,591,262	167,585,100	3,098,627	4,027,267
All other paper-stock	....	....	2,729,246	1,606,380
Plaster of Paris, unground ... tons..	117.226	166,150	119,543	168,023
Platinum, unmanufactured ... lbs..	2,612	2,862	285.239	289,898
Plumbago ... cwts..	110,762	144,749	207,229	286,383
Seeds, not medicinal	....	....	701,946	697,315
Silk, unmanufactured:				
Cocoons ... lbs..	223,121	445,629	195,760	456,198
Eggs	....	....	39,208	49,353
Raw ... lbs..	3,424,076	3,222,546	12,421,739	12,481.496
Waste ... lbs..	661,711	616,713	268,730	288,435
Spices, unground:				
Nutmegs ... lbs..	1,039,412	1,364,473	451,203	688,066
Pepper ... lbs..	9,103,669	13,331,079	1,209,367	1,656,540
All other ... lbs..	11,342.081	15,079,296	828,021	1,062,941
Tea ... lbs..	72,103,356	67,665,910	14,047,223	13,636,053
Tin, bars, etc ... lbs..	23,960,653	26,013,972	4,283,460	5,430,054
Wood, unmanufactured	....	....	3,525,898	4,348,476
Articles admitted free under reciprocity treaty with Hawaiian Islands:				
Rice ... lbs..	8,291,360	12,378,433	404,478	558,476
Sugar, brown ... lbs..	169,652,603	125,158,677	8,198,164	7,108,292
All other	....	....	70,939	81,549
All other free articles	....	....	4,562,812	4,165,262
Total free of duty	....	....	$193,181,073	$209,884,184
SUBJECT TO DUTY:				
Animals:				
Cattle ... No..	78,783	58,748	$1,136,632	$793,831
Horses ... No..	21,715	27,339	1,370,764	1,513,943
Sheep ... No..	331,104	293,848	860,447	816,832
All other	....	....	36,010	57,242
Art-works	....	....	1,383,697	830,801
Books, maps, engravings, etc	....	....	2,362,444	2,832,844
Brass, and manufactures of	....	....	424,787	486,737
Breadstuffs:				
Barley ... bush..	9,986,494	8,596,122	6,522,080	5,922,144
Rye ... bush..	239,014	656,113	181,949	459,015
All other	....	....	389,951	323,384
Bristles	790,502	988,736	926,749	1,201,735
Brushes ... lbs..	....	....	474,645	591,738
Buttons, and button materials	....	....	2,828,422	3,480,174
Cement ... bbls..	578,141	582,623	908,581	829,098
Chemicals, drugs, dyes, and medicines:				
Coal-tar colors and dyes	....	....	1,330,444	1,701,311
Glycerine ... lbs..	7,573,034	5,832,825	453,930	679,818
Logwood and other dye-woods, extracts and decoctions of ... lbs..	2,402,964	2,645,259	210,164	260,037
Opium—				
Crude ... lbs..	334,169	326,539	870,740	817,760
Prepared for smoking ... lbs..	50,265	4,633	447,531	43,993
Potash, nitrate of, or saltpeter, crude ... lbs..	12,413,229	10,397,251	344,819	321,738
Soda—				
Carbonate, including sal-soda and soda-ash ... lbs..	287,281,244	312,254,723	3,265,050	3,705,568
Caustic ... lbs..	69,774,100	77,561,649	1,530,684	1,761,762
All other salts of ... lbs..	9,912,956	8,135.170	103,341	92,586
Sumac, ground ... lbs..	13,590,812	16,316,614	443,161	586,025
All other	....	....	2,773,529	3,025,554
Clays or earths of all kinds, including china-clay, or kaolin ... tons..	24,346	27,716	193,192	222,394
Clocks and watches, and parts of:				
Clocks, and parts of	....	....	392,948	420,298
Watches, and parts of, and watch materials and movements	....	....	1,144,102	2,062,804
Coal, bituminous ... tons..	817,600	820,266	2,592,546	2,558,164
Copper-ore ... lbs..	3,578.752	2.259,833	341,831	226,189
Pigs, bars, and other copper ... lbs..	481,590	361,606	37,210	38,743
Manufactures of copper	....	....	119,710	261,756
Corsets	....	....	903,847	843,159
Cotton manufactures:				
Cloths—				
Not bleached, dyed, or printed ... sq. yards..	856,213	1,687,613	103,200	174,323
Bleached, dyed, etc ... sq. yards..	24,274,281	19,504,784	2,653,320	2,187,044
Clothing, not including knit goods	....	....	408,804	792,402
Embroideries, laces, etc	....	....	10,123,234	10,012,394

ARTICLES.	QUANTITIES.		VALUES.	
	1885.	1884.	1885.	1884.
Cotton-manufactures:				
Knit goods	....	....	$6,307,239	$6,994,341
Thread, yarn, etc. lbs..	909,480	1,895,699	652,202	1,839.777
All other manufactures of	....	....	6,949,236	7,574,345
Earthen and china ware, not decorated	....	....	995,225	1,317,603
Decorated or ornamented	....	....	2,828,352	2,771,864
All other crockery	....	....	1,014,208	865,346
Beads and bead-ornaments	....	....	403,017	507.424
Dolls and other toys	....	....	1,454,931	1,403,332
Fans, except palm-leaf	....	....	385.202	341,101
Feathers, ornamental, natural	....	....	1,938,431	3,713,214
Feathers and flowers, artificial	....	....	415,711	844,988
Perfumeries and toilet preparations	....	....	355,629	465,840
Pipes, and smokers' articles	....	....	215,231	269,086
All other fancy articles	....	....	415,789	537,442
Anchovies and sardines	....	....	579,707	1,040,663
Herring, pickled or salted bbls..	49,643	31,008	549,739	365,582
All other fish	....	....	222,528	446,384
Flax, hemp, jute, etc.:				
Flax tons..	6,435	5.086	1,712,994	1,410,578
Hemp, and substitutes for hemp tons..	32,463	25,925	4,938,342	4,227,876
Jute tons..	98,343	64,389	3,082.447	2,255,434
Sisal-grass, and other vegetable substances tons..	36,897	32,082	2,628,715	2,800,419
Bags and bagging	....	....	1,191,788	1,548,355
Burlaps	....	....	3,794,641	4,057,084
Brown or bleached linens, etc.	....	....	11,536,718	12,695,305
Thread, twine, and pack-thread	....	....	644,743	663,786
Yarns lbs..	12,115,289	7,415,420	606,860	446,394
All other manufactures of	....	....	2,717,326	3,358,161
Figs lbs..	7,770,178	7,945,977	510,732	512.063
Lemons	....	....	2,510,426	2,686,747
Oranges	....	....	2,088,204	2,901,228
Prunes lbs..	57,631,820	60,600,228	2,147,505	2,632,838
Raisins lbs..	38,319,787	53,702,220	2,661,699	3,290,150
Preserved fruits	....	....	770,880	585,048
All other fruits	....	....	1,176,136	2,469,054
Almonds lbs..	4,732,269	3,828,104	507,946	547,619
All other nuts	....	....	553,978	687,185
Furs, dressed, and manufactures of fur	....	....	3,403,346	5,649,548
Bottles, vials, carboys, and jars	....	....	590,079	521,787
Cylinder, crown, and window glass, unpolished lbs..	57,615,693	77,873,253	1,630,844	2,431,068
Plate-glass, unsilvered sq. feet..	2,622,622	2,651,975	900,461	959,817
Silvered plate-glass sq. feet..	2,376,803	3,924,231	1,192,147	1,387,728
All other glass	....	....	1,942,520	2,252,098
Hair, and manufactures of	....	....	242.079	437,734
Hats, bonnets, and materials for	....	....	4,570,429	3,776.009
Hay tons..	160,951	118,955	1,517,840	999,144
Hops lbs..	1,642,086	701,104	433,706	304,297
India-rubber and gutta-percha, manufactures of	....	....	231,165	328,137
Iron and steel:				
Ore, iron tons..	425,870	553,806	953,596	1,317,546
Pig-iron tons..	151.959	283,172	2,689,263	4,932,598
Scrap-iron tons..	19,840	46,506	242,116	653,105
Bar-iron, rolled or hammered lbs..	73,373,128	86,432,339	1,436,999	1,742,066
Bars, railway—				
Of iron tons..	26	587	890	17,749
Of steel, or in part of steel tons..	4,177	7,384	103.604	234,697
Cotton-ties lbs..	38,093,626	85,068,303	555,361	527,159
Ingots, blooms, and bars of steel lbs..	42.594,037	50,247,680	1,040,196	1,457,187
Sheet, plate, and taggers' iron lbs..	13,559,883	18,466,396	584,552	684,668
Tin plates, or taggers' tin lbs..	507,154,935	507.894,756	16,665,739	18,182,637
Wire rods lbs..	259,530.746	193.782,838	3,848,756	3,348,322
Wire, and wire rope lbs..	3,866,605	7,135,245	379,240	462,781
Cutlery	....	....	1,438,587	1,917,900
Fire-arms	....	....	1,169,292	1,355,385
Machinery	....	....	961,651	1,231,843
Needles	....	....	334 499	371,936
All other	....	....	2,263,827	3,279,516
Jewelry, and manufactures of gold and silver	....	....	1,115.469	910,827
Precious stones, and imitations of	....	....	5,704,018	8,854,015
Lead, and manufactures of	....	....	486,436	141,784
Leather, and manufactures of:				
Calf-skins, tanned, or tanned and dressed	....	....	1,934,110	2,505,670
Skins for morocco	....	....	1,632,839	1,637,305
Upper-leather, and skins, dressed and finished	....	....	3,130,474	3,115,764
Gloves, kid and leather	....	....	3,014,676	3,099,271
All other manufactures of	....	....	704.690	954,954
Malt-liquors gals..	2,059,130	2,078,759	1,097.184	1,179.111
Marble and stone, and manufactures of	....	....	895.990	957,769
Bronze manufactures	....	....	647,054	764,592
All other metal compositions	....	....	1,484,607	1,513.337
Musical instruments	....	....	1,425,047	1,749.349
Oils	....	....	1,013,633	1,174.477
Paints and colors	....	....	1,142,013	1,318,930
Paper, and manufactures of	....	....	1,592,890	1,714.419
Cheese lbs..	6,247,498	6,243,014	964,580	961,582
All other provisions and dairy products	....	....	865,819	881,870

ARTICLES.	QUANTITIES.		VALUES.	
	1885.	1884.	1885.	1884.
Rice....lbs..	72,685,000	94,252,090	$1.523,865	$1,912,961
Salt....lbs..	867,680,072	927,122,434	1,519,998	1,663,831
Linseed, or flaxseed....bush..	2,548,864	2,849,226	2,817,715	3,079,848
All other seeds not medicinal....	....	....	977,182	559,455
Silk, manufactures of:				
Clothing, ready-made, and other wearing apparel...	....	....	542,294	718,611
Dress and piece goods....	....	....	14,651,533	18,858,214
Laces....	....	....	1,687,739	2,576,890
Ribbons....	....	....	1,173,022	2,677,539
All other....	....	....	9,412,875	11,842,892
Soap....	....	....	401,150	437,955
Brandy....proof gals..	503,945	506,681	1,227,556	1,263,808
All other spirits....proof gals..	1,011,805	1,171,951	778,339	847,976
Sponges....	....	....	333,774	291,859
Sugar:				
Molasses....gals..	31,321,244	33,965,293	4,190,242	5,577,722
Sugar, not above 13, Dutch standard....lbs..	2,548,210,538	2,630,352,807	64,320,170	91,080,958
All other sugar, candy, and confectionery....	....	....	21,083	94,344
Tobacco:				
Leaf....lbs..	12,922,210	12,955,017	6.301,222	5,962.163
Cigars, cigarettes, and cheroots....lbs..	918,174	891,769	3,127,689	3,189,225
All other manufactures of....	....	....	83,683	87.134
Beans and peas....bush..	284,770	865,367	252,395	1,160,796
Other vegetables, in the natural state, pickled, preserved, etc....	....	....	1,589.549	1.516,673
Champagne wines....doz..	228,580	201,414	2,834.816	2,362,137
Still wines, in casks....gals..	3,419,475	2,774,771	2,241,636	1.979,953
Still wines, in bottles....doz..	239,298	251,489	1,198,570	1,318,743
Boards, and other sawed lumber....M feet..	555,582	600,762	6.814,248	7,757.156
All other wood and manufactures of....	....	....	2,288,725	2,575,434
Wool, and manufactures of:				
Clothing-wools....lbs..	11,475.889	21,175,228	2,262,824	4,807.686
Combing-wools....lbs..	2.780,751	4,414,253	669.604	1,017,311
Carpet-wools, etc....lbs..	56,339,580	52,761,170	5,947,495	6,559,762
Carpets....sq. yards..	799,617	953,675	1,127,492	1,303,035
Clothing....	....	....	1,902,687	2,150,399
Cloths....lbs..	8,045,649	10,340,622	10,102,343	12,921,840
Dress-goods....sq. yards..	59,598,880	59,432,436	13.464,647	13,906,463
Knit goods....	....	....	2,208,456	2,258.952
Rags, shoddy, and waste....lbs..	700,231	1,316,088	296,525	564.694
Shawls....	....	....	1,047,162	962,548
Yarns....lbs..	813,509	1,471,363	624,620	1,054,576
All other....	....	....	5,007,613	6,035,081
All other dutiable articles....	....	....	5,193,523	5,422,361
Total value of dutiable merchandise....	....	....	$384,295,777	$457,813,509
Total merchandise, free and dutiable....	....	....	$577,476,850	$667,697,693

Exports.—The returns of domestic exports in 1884–'85 show a considerable increase in the exports of cereals, but at lower prices, making the aggregate value somewhat less; a slight increase in the quantity and value of the cotton export, a smaller export of live animals, and a slightly increased export of provisions, but at lower prices, reducing the aggregate value by about the same percentage as the quantities were increased; a larger export of mineral oils, but without a corresponding increase in value; a decrease in the timber export; an unprecedented export of manufactured sugar, an increased export of tobacco at higher prices, a considerable increase in the export of cotton piece goods, though scarcely any in the value; an increased export of leather, of whisky, and some other articles, but diminished exports of agricultural implements, sewing-machines, iron and steel manufactures, except fire-arms and builders' hardware, and most of the minor manufactures that enjoy a reputation in foreign lands. The commissioners who visited the countries of Central and South America, in pursuance of the congressional resolve of July 7, 1884, to study the means of promoting American commerce, reported in favor of establishing regular and direct steam communication with those countries, and of improving the consular service by appointing American citizens who shall be allowed to act as agents for American manufacturers. They recommend sending young men familiar with the Spanish language as commercial traveling agents. The conclusion of new treaties of commerce is urged. American hardware, axes, knives, spades, and other agricultural implements, now find a ready sale in Spanish America. German and other European manufacturers imitate American trade-marks. American locks, sewing-machines, unbleached cottons, oil-cloths, furniture, and many other articles, are fast superseding those of European make. The extent of American commerce with the neighboring republics is, however, insignificant as compared with that of Great Britain, and much less than that of Germany or France. English exporters are able to give long credits, charging 6 per cent. interest per annum. The following table gives the quantities, as far as they are published by the Treasury Department, and the values of all the larger articles of export, the product of the United States for the fiscal year 1884–'85, compared with the previous twelvemonth:

ARTICLES.	QUANTITIES.		VALUES.	
	1885.	1884.	1885.	1884.
Mowers and reapers	....	....	$1,348,232	$2,096,298
Other agricultural implements	....	....	1,213,495	1,346,469
Animals:				
Cattle ..No..	135,895	190,518	12,908,145	17,855,495
Hogs ..No..	55,025	46,882	579,183	627,480
Horses ..No..	1,942	2,721	376,237	424,317
Mules ..No..	1,028	3,742	127.580	490,309
Sheep ..No..	234,509	273,874	512,568	850,146
Other animals and fowls	....	....	63,368	45,282
Paintings and statuary	....	....	227,145	176,389
Bark, and extract of, for tanning	....	....	346,218	292,851
Books, maps, engravings, and other printed matter	....	....	1,389,350	1,414,951
Brass, and manufactures of	....	....	538,118	301,014
Breadstuffs:				
Barley ..bush..	629,130	724,955	346,302	403,622
Bread and biscuit ..lbs..	16,471,972	17,580,740	702,027	847,671
Indian corn ..bush..	51,834,416	45,247,490	28,003,863	27,648,044
Indian-corn meal ..bbls..	260,510	252,779	816,459	818,739
Oats ..bush..	4,191,692	1,760,376	1,589,703	700,694
Oatmeal ..lbs..	36,205,418	27,256.427	1,036,011	771,471
Rye ..bush..	2,950,558	6,220,206	2,000,294	4,323,105
Wheat ..bush..	84,653,714	70,349,012	72,933,097	75,026,678
Wheat-flour ..bbls..	10,647,971	9,152,260	52,155,602	51,139,696
All other breadstuffs, and preparations of, used as food	....	....	736,771	864,995
Candles ..lbs..	2,245,463	1,907,409	256,719	240,500
Carriages and horse-cars	....	....	1,495,495	1,582,459
Cars for steam railroads ..No..	563	2,089	369,053	1,444,039
Casings for sausages	....	....	642,351	499,134
Chemicals, drugs, dyes, and medicines:				
Acids	....	....	....	....
Ashes, pot and pearl ..lbs..	775,582	744,769	....	....
Dyes and dyestuffs	....	....	656,148	675,492
Ginseng ..lbs..	377,345	295,242	751,168	614,995
Medicines, patent or proprietary	....	....	1,317,483	1,340,583
Roots, herbs, and barks, n. e. s	....	....	....	....
All other	....	....	2,081,387	2,063,316
Clocks, and parts of	....	....	1,209,048	1,168,484
Watches, and parts of	....	....	136,892	191,206
Coal:				
Anthracite ..tons..	588,421	649,040	2,586,421	3,053.550
Bituminous ..tons..	683,487	646,265	1,989,541	1,977,959
Copper:				
Ore ..tons..	41,615	19,307	4,739,601	2,930,895
Ingots, bars, and old ..lbs..	44,672,493	16,939,080	5,328,903	2,505,279
Manufactures of	....	....	118,520	159,685
Cotton, and manufactures of:				
Sea Island ..lbs..	7,764,033	3,598,866	1,685,635	1,160,673
Other unmanufactured ..lbs..	1,884,895,444	1,858,973,664	200,276,823	195,854,531
Colored ..yards..	32,738,113	35,441,296	2,230,567	2,579,866
Uncolored ..yards..	114,806,595	99,750,450	7,919,670	7,503,361
Wearing-apparel	....	....	267,875	349,270
All other manufactures of	....	....	1,418,579	1,452,714
Earthen, stone, and china ware	....	....	135,385	236,247
Eggs ..doz..	240,768	295,484	....	....
Fancy articles:				
Perfumery and cosmetics	....	....	286,231	403,205
All other	....	....	592,604	744,975
Fertilizers ..tons..	136,976	161,352	910,778	1,096,021
Fish:				
Codfish, dried, smoked, and cured ..lbs..	18,178,987	14,929,123	724,858	734,946
Mackerel, pickled ..bbls..	24,530	13,102	139,663	107,950
Salmon, canned	....	....	2,260,567	2,323,026
Other fish, dried, smoked, and cured, n. e. s ..lbs..	6,517,347	7,174,332	354,195	415,006
Oysters	....	....	715,619	572,487
Other shell-fish	....	....	411,984	228,030
Flax, hemp, and jute, manufactures of:				
Bags	....	....	398,615	529,217
Cordage ..lbs..	7,220,287	6,975,776	624,372	672,142
Twine	....	....	....	....
All other	....	....	291,153	196,413
Fruits:				
Apples, dried ..lbs..	18,413,366	5,558,746	1,062,839	394,350
Apples, green or ripe ..bbls..	675,867	105,400	1,572,126	422,447
Fruits, canned	....	....	473,944	495,143
Other	....	....	....	....
All other	....	....	406,720	434,478
Furs and fur-skins	....	....	4,152,028	3,998,182
Glass and glassware	....	....	783,915	889,756
Glucose, or grape-sugar ..lbs..	1,825,795	6,773,115	60,078	212,628
Grease and soap-stock	....	....	712,855	715,650
Gunpowder	1,296,576	1,872,956	185,868	294,620
All other explosives	....	....	1,181,453	883,302
Hair, and manufactures of	....	....	571,192	640,939
Hay ..tons..	11,152	16,908	204,705	309,781
Hides and skins, other than furs	....	....	1,822,058	1,304,329
Honey	....	....	224,212	68,764

ARTICLES.	QUANTITIES.		VALUES.	
	1885.	1884.	1885.	1884.
Hops........lbs..	7,055,289	13,516,643	$1,891,854	$3,265,211
India-rubber and gutta-percha, manufactures of........	....	....	686,156	635,046
Instruments, scientific, telegraph, telephone, and other	....	....	449,587	557,424
Iron and steel, and manufactures of:				
Castings........	....	....	886,179	871,693
Fire-arms........	....	....	1,700,655	1,266,831
Locks, hinges, and other builders' hardware........	....	....	1,156,654	920,283
Machinery........	....	....	3,794,795	5,256,431
Nails and spikes........lbs..	8,552,508	9,165,377	246,358	306,625
Printing-presses, and parts of........	....	....	177,111	208,465
Steel rails........tons..	6,853	2,801	206,401	119,284
Saws and tools........	....	....	1,108,474	1,290,448
Scales and balances........	....	....	273,961	384,865
Sewing-machines, and parts of........	....	....	2,898,698	3,552,814
Steam-engines, and parts of—				
Locomotive-engines........No..	85	282	732,403	2,819,946
Stationary engines........No..	109	135	187,675	171,040
Boilers and parts of engines........	....	....	199,035	361,907
Stoves and ranges, and parts of........	....	....	209,802	207,120
Wire........lbs..	5,013,734	5,573,562	242,948	358,366
All other manufactures, ore, etc........	....	....	3,139,870	4,325.844
Jewelry, and manufactures of gold and silver........	....	....	380,520	558,825
Lamps and appliances for illuminating........	....	....	522,497	490,491
Leather, and manufactures of:				
Buff, grain, splits, and uppers........	....	....	2,578,991	2,062,651
Patent or enameled........	....	....	291,943	116,817
Sole........lbs..	27,813,711	22,421,293	5,416,830	4,613,106
All other........	....	....	251,615	230,996
Boots and shoes........pairs..	492,906	502,122	598,151	602,925
Harness and saddles........	....	....	178,411	215.750
All other manufactures of........	....	....	376,467	468,584
Malt liquors:				
In bottles........doz..	233,816	238,228	436,321	451,681
Not in bottles........gals..	170,118	236,896	55,097	78,089
Marble and stone, and manufactures of........	....	....	513,505	608,260
Organs........No..	8,594	8,868	584,279	641,188
Piano-fortes........No..	915	1,020	244,882	300,626
All other musical instruments........	....	....	112,768	187,804
Rosin........bbls..	1,269,286	1,545,211	2,209,815	2,909,074
Tar, turpentine, and pitch........bbls..	....	....	96,196	210,126
Oil-cake and oil-cake meal........lbs..	498,664,241	524,847,331	6,674,466	7,115,153
Oils:				
Lard........gals..	916,157	712,696	555,426	504,218
Sperm........gals..	209,846	343,069	183,499	325,885
Whale and fish........gals..	977,768	488,915	321,227	190,704
Other animal........gals..	106,793	159,486	75,836	150,118
Mineral, crude........gals..	81,037,992	67,186,329	5,903,833	5,302,974
Naphthas........gals..	15,822,853	15.045,411	1,272,290	1.072,651
Illuminating........gals..	458,243,012	415,615,693	40,074,827	38,195,849
Lubricating and heavy paraffine oil........gals..	13,002,483	10,515,535	2,632,883	2,179,595
Residuum........bbls..	156,280	126,122	374,114	352,679
Cotton-seed........gals..	6,364,279	3,605,946	2,614,592	1,570,871
Volatile or essential........	....	....	245,872	196,910
Other vegetable........	....	....	71,808	84,748
Ore, gold- and silver-bearing........	....	....	122.629	1,052,841
Paraffine and paraffine-wax........lbs..	24,377,488	17,089,817	1,725,344	1,263,197
Paints and painters' colors........	....	....	351,507	477,469
Paper, and manufactures of........	....	....	972,498	929,821
Plated ware........	....	....	509,878	463,762
Provisions (comprising meat and dairy products):				
Beef, canned........	....	....	4,214,720	3,178,767
Beef, fresh........lbs..	115,780,830	120,784,064	11,199,481	11,987,381
Beef, salted or pickled........lbs..	48,143,705	42,879,911	3,619,145	3,202,275
Beef, other cured........lbs..	572,427	641,163	78.895	67,758
Tallow........lbs..	50,481,769	63,091,108	3,322,476	4,798,875
Mutton........lbs..	3,355,660	2,932,855	324,099	282,087
Imitation butter........lbs..	761,938	1,537,682	92,779	171,119
The oil........lbs..	37,120,217	37,785,159	4,358,853	4,671,248
Bacon........lbs..	345,920,606	341,579,410	31,052,787	33,797,430
Hams........lbs..	54,201,321	47,919,958	6,030,509	5,887,415
Pork, salted or cured........lbs..	70,660,765	60,863,318	5,177,186	4,749,658
Lard........lbs..	283,215,979	265,094,719	22,595,171	25,305,958
All other meat products........	....	....	961,295	646,885
Butter........lbs..	21.682,788	20,627,374	3,643,598	3,750,771
Cheese........lbs..	111,992,990	112,869,575	10,444,409	11,663,713
Milk........	....	....	221,114	208,008
Quicksilver........lbs..	515,867	1,242,080	206,630	427,219
Seeds:				
Clover........lbs..	17,667,925	27,404,737	1,525,414	2,730,815
Timothy........lbs..	3,830,787	6,836,394	157,544	370,411
Other........	....	....	483,947	376,157
Silk, manufactures of........	....	....	74,610	80,578
Soap:				
Toilet or fancy........	....	....	697,294	740,426
All other........lbs..	13,804,988	14,169.424		
Alcohol........proof gals..	4,711,094	3,897,082	821,296	764,963
Rum........proof gals..	875,589	667,847	269,352	223,887

ARTICLES.	QUANTITIES.		VALUES.	
	1885.	1884.	1885.	1884.
Bourbon whisky.....proof gals..	4,794,971	2,595,991	$3,880,102	$2,236,617
Rye whisky.....proof gals..	605,111	834,087	550,128	856,728
All other spirits.....proof gals..	81,878	83,991	44,238	56,489
Spirits of turpentine.....gals..	8,987,316	11,300,729	2,690,231	3,885,500
Starch.....lbs..	6,851,963	6,787,909	276,274	305,515
Stationery, except of paper.....	.....	.....	395,123	342,989
Sugar and molasses:				
Molasses and sirup.....gals..	6,749,859	5,906,005	858.894	898,966
Sugar, brown.....lbs..	162,059	202,079	9,089	14,665
Sugar, refined.....lbs..	252,574,335	75,920,734	16,071,699	5,402,498
Candy and confectionery.....	.....	.....	88,599	112,046
Tobacco:				
Leaf.....lbs..	219,221,207	192,130,820	21,799,251	17,405,234
Cigarettes.....M..	102,679	79,032	317,653	248,890
Stems and trimmings.....lbs..	11,265,429	15,026,867	226,535	360,526
All other manufactures of.....	.....	.....	2,423,866	2,281,567
Varnish.....gals..	80,399	106,832	134,103	209,715
Peas and beans.....bush..	271,024	201,106	522,292	409,074
Potatoes.....bush..	380,857	554,613	265,337	374,588
All other vegetables, including canned.....	.....	.....	308,126	329,517
Steamers sold to foreigners.....tons..	1,698	1,493	261,265	300,200
Sailing-vessels sold abroad.....tons..	4,839	5,039	126,195	81,140
Whalebone.....lbs..	188,482	92,653	470,039	319,508
Wine.....	.....	.....	95,299	94,232
Wood, and manufactures of:				
Boards, deals, and planks.....M feet..	412,115	414,920	6,548,115	7,079,701
Hoops and hoop-poles.....	.....	.....	346,598	356,470
Shooks—				
Box-shooks.....	.....	.....	205,836	186,853
Other shooks.....	.....	.....	1,465.465	1,526,437
Staves and headings.....	.....	.....	1,950,744	2,686,473
All other wood and lumber.....	.....	.....	1,546,123	1,393,665
Sawed timber.....M feet..	153,243	201,257	1,609,485	2,247,328
Hewed timber.....cubic feet..	8,315,162	10,615,065	1,289,281	1,735,382
Logs, and other timber.....	.....	.....	1,691,780	1,704,635
Doors, sash and blinds, and house-finishings.....	.....	.....	415,503	468,603
Hogsheads and barrels, empty.....	.....	.....	324,206	320,184
Household furniture.....	.....	.....	2,128,692	2,429,831
Wooden-ware.....	.....	.....	321,464	406,264
All other manufactures of.....	.....	.....	1,590,714	1,724,838
Wool, and manufactures of:				
Wearing apparel.....	.....	.....	538,726	532,658
Other manufactures of wool, and raw wool.....	.....	.....	253,776	174,523
All other unmanufactured articles.....	.....	.....	1,186,963	1,138,283
All other manufactured articles.....	.....	.....	2,179,602	2,316,544
Total value of exports of domestic merchandise.	.....	.....	$726,668,080	$724,964,852

The returns of the exports of foreign merchandise show an increase in the shipments of coffee from 26,152,679 pounds, valued at $2,731,311, to 33,335,146 pounds, valued at $3,334,048; a decline in the transit trade in tea from 7,603,966 to 5,730,591 pounds, or in value from $1,322,853 to $911,801; a falling off in timber, rice, in rails, in other iron manufactures, in Sisal grass and similar textile materials, and in various manufactured products, with an increase in some finished manufactures and in lead, tobacco, wool and woolen manufactures, silk manufactures, etc. The trade with Canada has suffered from the general depression and from the continued effects of the Canadian tariff. The Pacific and overland trade in Asiatic products has also declined. But the returns indicate an improving trade, to some extent, with Mexico and certain other parts of Spanish America.

CONGO, FREE STATE OF THE. The conclusions of the Berlin Conference, embodied in a general act, left King Leopold and the International Association free to organize an independent state for the exercise of the sovereignty over the Congo region which Europe and America conceded to the Association. The territory awarded to the Association by the Conference has an extent of 1,100,000 square miles. The population is computed by Mr. Stanley, who found the river-banks between the cataracts and Stanley Falls inhabited by from 800,000 to 900,000 souls, to be about 40,000,000.

Results of the African Conference.—The conference of powers interested in Africa, which met on the invitation of the German in conjunction with the French Government, assembled in Berlin Nov. 15, 1884, and separated Feb. 26, 1885. The powers represented by plenipotentiaries were Germany, Austria-Hungary, Belgium, Denmark, Spain, the United States of America, France, Great Britain, Italy, the Netherlands, Portugal, Russia, Sweden and Norway, and Turkey. The purposes of the Conference were to introduce freedom of commerce into the basin and the embouchures of the Congo, to extend to the Congo and the Niger the principles of freedom of navigation adopted in relation to various international rivers at the Vienna Congress, and to decide upon the formalities to be observed by the powers in taking possession of new territory on the coasts of Africa. The decisions of the Conference were embodied in an *acte générale.* On the motion of the Italian representative, who was seconded by Mr. Kasson, representing the United States, it was decided that in case of a serious misunderstanding arising between any of the powers in relation to territories lying within the neutralized Congo district, a resort to mediation must always precede military action. Since the political institutions of the United States precluded the ratification of the *acte générale* by that power, at an early date it was agreed that the International Commission, which was to meet within six months after the ratification of the act of navigation, should be nominated by five of the powers. The eastern limit of the neutralized Congo district was altered so as to follow the water-shed of the eastern affluents of Lake Tanganyika. The northern and southern limits were left as proposed in behalf of the International Association, as was the Atlantic coast-line made free to the commerce of all nations. The general act of the Berlin Conference—thus termed, to distinguish it from the Berlin Treaty of 1878—consists of six chapters. The first contains a declaration of freedom of trade in the basin of the Congo, and provisions connected therewith. The conventional basin of the Congo comprises all the regions drained by the Congo and its affluents and by Lake Tanganyika and its tributaries, the littoral of the Atlantic Ocean from Sette Camma to the river Loge, and the region lying between the rivers flowing into the ocean and the Loge, and lines running from the sources of those rivers to the northern and the southern water-shed of the Congo. The littoral of the Indian Ocean, between the fifth degree of north latitude and the mouth of the Zambesi, is declared free to commerce as far as the contracting powers are concerned, but without undertaking engagements with reference to the governments established on the shore, such as Portugal and Zanzibar, except to use their good offices to secure from these governments the most favorable conditions to the traffic of all nations. The other articles of this chapter relate to the free access of all flags to the streams and lakes of the Congo basin, the free import of all wares, subject only to dues necessary in the interest of trade, without paying import or transit dues, the prohibition of monopolies or trading privileges, the equal rights of foreigners with those of subjects of the sovereign states, the protection of natives, travelers, and missionaries, and freedom of worship, the introduction of the *régime* of the Postal Union, and the surveillance of the Navigation Commission. The second chapter contains a declaration binding the powers exercising sovereign rights in the Congo basin to employ all the means at their disposal to put an end to the slave-trade, and to punish those who engage in it. The third chapter contains the long-debated provisions with reference to the neutralization of the Congo basin. Each of the signatory powers binds itself to respect the neutrality of the territories if the powers exercising the rights of sovereignty or protectorate over those territories proclaim themselves neutral and observe the obligations of neutrality. If a power possessed of territorial rights in the Congo basin becomes involved in war, the treaty powers promise to lend their good offices with both belligerents to induce them to abstain from extending hostilities to territories lying within the free-trade district. Mr. Kasson proposed the absolute neutralization of the conventional Congo basin, but the objections of some of the delegates, especially of Baron de Courcel, the French representative, led to the adoption of this compromise. The articles binding the powers to appeal to mediation before appealing to arms in case of a serious disagreement with regard to territories within the free-trade district, was added afterward in committee. The fourth chapter contains the act of navigation of the Congo. The International Commission for the Navigation of the Congo will draw up navigation, river police, pilot, and quarantine rules, which are to be submitted to the powers for approval, as well as the tariffs. The International Commission is empowered to ordain the construction of works necessary to assure the navigability of the Congo in accordance with the needs of international trade on sections where no power exercises sovereign rights, and in concert with the riparian power on other sections; to fix pilot, general navigation, and harbor dues; to administer the revenue derived therefrom; to superintend a quarantine establishment at the mouth of the Congo; and to appoint officials for the general service of navigation and its own employés. The riverain powers appoint sub-inspectors on sections of the river occupied by them. They are also expected to construct wharves, warehouses, etc., on those sections. All harbor dues for the use of these local establishments must be in proportion to their cost. Pilot dues must not exceed the value of the service rendered. The general navigation dues, including lighthouse dues, must be based on tonnage, following the rules adopted for the Danube. The Commission may call for the assistance of the war-vessels of any of the signatory powers. War-vessels of the signatory powers are exempt from the payment of general navigation dues. The International Commission is empowered to contract loans on the vote of two thirds of its members. The Congo, its affluents, and all the works and means of communication in charge of the Commission, are declared neutral and open to all traffic in time of war, the same as in time of peace, except for the transit of contraband of war destined for a belligerent. Roads, railways, or lateral canals constructed for the special purpose of obviating the innavigability or correcting the imperfections of the river route, shall be considered as dependencies of the river, and open to the trade of all nations equally with it. The fifth chapter of the general act contains the act of navigation for the Niger. The sixth chapter contains a declaration of the essential conditions to be observed in order that new occupations on the coast of Africa may be held effective. These require that a power occupying new territory or establishing a protectorate shall notify the other signatory powers in order that they may advance any claims of their own over the tract. The powers occupying territories on the coast are expected to insure the establishment of authority sufficient to protect existing rights, and free trade and transit, if the power has bound itself to secure them. The seventh chapter contains general dispositions with reference to the ratification and amendment of the general act and its adoption by any other power at any time.

The Partition of the Lower Congo.—The International Association was unable to secure the support of the powers to its claim to the whole of the lower Congo and Atlantic coast-line from the Loge to the Niadi-Kwilu river. The entire district was placed under the free-trade system, but in respect to sovereign rights it was obliged to come to a compromise with Portugal and France, and divide the territory with those powers. Portugal claimed both banks of the estuary of the Congo and the littoral north of Ambriz, as far as latitude 5° 12′ south. This claim, based on traditional rights of sovereignty, was recognized in the provisional Anglo-Portuguese treaty, which was rejected by the other powers, led by Germany. Since then Portugal had attempted to perfect her title to sovereignty by effective occupation of certain places in the disputed district. North of 5° 12′ south latitude there were spots along the coast under the protectorate of France, and others under the protectorate of Portugal. At Rudolfstadt, at the mouth of the Niadi Kwilu, began the chain of stations of the International Association, extending to Leopoldville. Along the Congo, beginning at Vivi, on the north bank, another line of stations follows the road built by Stanley on the southern bank of the river. France claimed the coast from where the coast-line claimed by Portugal ended to the river that flows into the ocean at Sette Camma, thus depriving the Association of all frontage on the Atlantic. France claimed also, in virtue of treaties concluded with native chiefs by De Brazza, the whole interior north of the Congo, except a strip on the Congo, and at Stanley Pool laid claim not only to the right bank, which was conceded to her, but to the left bank also, where the International Association was established. The French claim to both banks of the Congo extended from below Stanley Pool to the mouth of the Kwango.

By the arrangements concluded between Portugal and the Association, the Portuguese claim to the sea-coast up to south latitude 5° 12′ was recognized, and her right to the southern bank of the Congo as far as Nokki and to the country south of a line running due east from Nokki to the Kwango. In return, Portugal ceded to the Association the right bank of the Congo estuary, with a coast-frontage of thirty-eight miles, extending to Red Point. By this arrangement the Association secured a river terminus to the projected railroad, to be built along the cataract-broken stretch from Stanley Pool to Vivi, as well as a short coast-line and a position at the mouth of the Congo. England and France united with Germany in exercising pressure upon Portugal to secure this compromise, and France contributed a territorial sacrifice, ceding to Portugal a strip of the coast north of the Chiloango river, the limit of the coast-line claimed by Portugal, about equal to the strip ceded to the Association at the mouth of the Congo. Portugal was thus secured in possession of the coast-region north of the Congo, including the districts of Kabinda, Molembo, Landana, and Massabe, where a large trade has long been carried on without any organized administration except that supplied by the traders. The Association obtained Banana, the most important trade-center on the west coast of equatorial Africa, with the exception of Loando.

Before the arrival of the decisions of the Berlin Conference on the Congo, and as late as March, 1885, the Portuguese naval authorities and mercantile agents in the lower Congo region were busy making treaties with natives on both banks of the Congo. The Portuguese flag was hoisted at various places on the coast between Banana Point and Kabinda.

The compromise arranged with France left the Association undisputed master of the left bank of the Congo around and above Stanley Pool. It was obliged, in return, to abandon to France the whole of the Kwilu district lying north of the Chiloango, and to evacuate the line of stations along the Niadi-Kwilu river, fourteen in number. The boundary between the French territory of the Gaboon, thus extended, and the territory of the Free State, follows the Chiloango river from where it enters the Portuguese *enclave* up to its sonrce, thence runs in an easterly and south-easterly direction till it joins the Congo at a point just above Manyanga, and thence follows the channel of the Congo to a point just north of the equator and east of the Likona river, where it leaves the Congo for the junction of the Likona water-shed with the 17th meridian, and then follows that meridian northward.

Institution of the Congo Free State.—A constitution for the new state was devised by Prof. Ahn, and the work completed, since his death, by Col. Strauch and Sir Travers Twiss. It followed the principles of an English colonial administration. At the head of the state was to be a governor, with the title of *chef d'état*, and under him three deputy-governors, presiding over different districts. The headquarters of the administration were to be in Brussels. The King of the Belgians had expended on the Association 25,000,000 francs down to the close of the conference, and promised to endow the state with an income of 1,000,000 francs a year. The flag of the Association, a golden star on a blue ground, already recognized by several governments, became the flag of the Free Congo State.

King Leopold, with the approval of the Belgian legislature, assumed the title of Sovereign of the Congo State, and appointed a Cabinet for the new kingdom. Col. Strauch, previously President of the International African Association, was made Premier and Minister of the Interior and of War. M. van Eetvelde, late consul-general at Bombay, was appointed Minister of Commerce. M. van Neuss, a high Belgian official, became Minister of Finance. Brussels was declared to be the seat of government. Arrangements were made for the entrance of the Free State into the Universal Postal Union on Jan. 1, 1886.

The Settlements of the Congo.—Stanley left the Congo in October, 1884. His successor in the chief command was Col. Sir F. de Winton. In the summer of 1885 reports reached Europe of the breaking down of the organization of the Association on the Congo, of privations, sickness, and death among the employés, of conflicts with the natives, of the falsity of official reports of the climate and resources of the country. The Congo State was represented as a swindle, which was prevented from being exposed by the secrecy with which its affairs were conducted. Mr. Tisdell, who ascended to the middle Congo, made an unfavorable report to the United States Government on the productiveness and salubrity of the country. The officers of the Association answered these charges by admitting that the climate of the lower Congo was unhealthful, and that of the country about Stanley Pool was still more so, but asserted that danger could be avoided by sanitary precautions and a careful regimen. The regions visited by Mr. Tisdell they acknowledged to be only moderately productive. The Upper Congo region was that from which they expected most. This they declared to be very salubrious and one of the richest regions on the globe in natural wealth. The unfavorable reports of the working of the Association came from discharged or dissatisfied employés, or from trading establishments in the Congo regions that looked upon the Belgium enterprise as a rival concern. Mr. Stanley said that 150 men had been discharged, and that a large proportion of the European recruits were found incapable or became dissatisfied. Up to the middle of August 350 men had been sent out, and, down to March, 24 had died from sickness and five from accidents. There were in the Free State 23 stations, with two or more white men at each station. The great Dutch trading corporation and the English firms and those of other nationalities established on the coast have viewed the development of the Free State with hostile eyes, though when the question arose between coming under its jurisdiction, or that of Portugal or France, they preferred the former. If they could have had their way, the coast and interior would have remained a no-man's-land over, which their own resources were sufficient for the protection of their interests. In financial means, men, and munitions, and power and influence over the natives, some of these great mercantile houses were not inferior to the new state, while their organization was more compact and efficient. Besides the 150 white employés of the new state, it has in its service 2,200 blacks, including 800 Zanzibaris, 300 Kroomen, 800 Haussas, and 300 Kabindas. There have been sent out to the Congo 5,000 rifles and a number of cannon and machine-guns. The import of European fire-arms for sale to the natives has been interdicted by the new Government, but not that of flint-lock guns, which are so common an article of trade as to constitute the unit of account in bartering with the natives in some places. In August the death was reported of the Marchese Bonfanti, a naturalized American citizen, and M. Casman, a Belgian, two prominent officials of the Congo State.

The plan of establishing a line of stations between Lake Tanganyika and the upper Congo was abandoned, and the expedition sent for that purpose to Zanzibar was recalled in March. The following stations have been established by the Association in the valley of the Congo: Mpozo, Banza, Manteka, Voondah, Lukungo, South Manyanga, Lutete, Leopoldville, Kinchassa, Kimpoko, Msouta, Kouamout, Bolobo, Loukolela, and Equator, situate on the south bank of the river, and Boma, Ikungula, Vivi, Issanghila, North Manyanga, Bangala, Aruwimi, and Falls station on the north bank. Of these, Falls station and Aruwimi, the most remote, were abandoned in 1885 on account of the repeated attacks of Arabs and native traders. Bolobo was besieged for a long time by several hundred natives. Preparations were made for abandoning it and Kouamout, where the hostility and thieving habits of the Amazon tribes rendered the station dangerous and valueless. All the stations on the Niadi Kwilu and the Ogowé were surrendered to the French according to treaty. At Boma, Ikungula, Vivi, Issanghila, and Leopoldville, the houses are substantially constructed of wood. At Vivi and Leopoldville there are from ten to twenty white men, at the other stations two or three. The chief of each station has a guard of from ten to thirty Houssas, negroes from the English Colony of Lagos. His duties are to employ carriers, to protect caravans, and to furnish couriers for mails and dispatches. Whenever a station is attacked or a caravan stopped, a force of Houssas is concentrated rapidly and the natives are punished. The natives have great dread of the Houssas, who are excellent marksmen. From Mpozo to Stanley Pool all goods are carried on the heads of Loango or Kabinda carriers, each man's load being seventy pounds. On the north shore whaleboats are used for 84 of the 250 miles.

The cost of transportation per ton from Europe to Leopoldville is about $25 to Banana, $75 up the river to Vivi, and $300 from Vivi to Stanley Pool. The country supplies fowls and goat-meat, and mandioca, ground-nuts, bananas, and corn, but most of the food and all other supplies are brought from Europe. In January, 1885, the British Government revoked the permission to enlist Houssas and Lagos men. The supply of Zanzibar boatmen and porters was cut off in April.

Missionaries on the Congo.—In the wake of Stanley's progress in the establishment of stations on the middle and upper Congo the Baptists of England and the Livingstone Inland Congo Society founded missions. Comber, Grenfell, Sims, Craven, Pères Carré and Augouord, settled at various places along the river. The American Baptists undertook later to share the task with the English Livingstone Congo Missionary Society, and sent out missionaries of both sexes. In the lake-region the field is divided between the Scotch Free Kirk, the London, the Church, and other British societies and the Roman Catholics. The Roman Catholic Church, as well as the Livingstone Congo Society, afterwards established missions on the Congo. There were in the Congo region in the summer of 1885 fourteen Protestant and four Catholic missions.

Commerce of the Congo.—The trade of the Congo region has increased but little since the establishment there of the International Association. The commercial houses founded under the auspices of the Association have not been successful. The trade remains principally in the hands of the New African Trading Company, of Amsterdam, and the English house of Hatton & Cookson. The remainder is divided between a French, a Portuguese, and an English house. Numerous small Portuguese firms act as middle-men. The leading exports are, in the order of their importance, palm-oil, peanuts, palm-kernels, caoutchouc, and ivory. The development of the trade of the upper Congo depends on the construction of the railroad to Stanley Pool. Mr. Stanley endeavored in 1885 to enlist capital in the construction of this railroad. The trade prospects of the Congo valley and the profitableness of the railroad were the subject of controversy between the agents of the Free State and various critics. Mr. N. P. Tisdell, Agent of the United States to the Congo states, reported that the low country within one hundred miles of the coast furnished substantially all the exports, and that these were brought by the long-established caravan routes to Ambriz, St. Paul de Loando, Benguela, Ambrizette, Banana, and other posts north and south of the mouth of the Congo, and to stations on the Coanzo river in Angola. Ivory is brought from the far interior, but in diminishing quantities. The natives on the lower and middle Congo are described as treacherous, cruel, thievish, lazy, and drunken. The promoters of the Congo Association, without contradicting these assertions, hold the belief that a railroad to Stanley Pool would open up a trade seven times greater than that on the coast of Guinea from the Gambia to St. Paul de Loando, which amounts to about $150,000,000 per annum. They base their estimate on the length of open river navigation on the Congo and its main tributaries, which is over 11,000 miles. The climate and resources of the upper Congo valley are declared to be much superior to those of the lower part of the valley visited by the critics of the enterprise. The character and habits of the people are said to be more favorable for trade. The total population of the region that would be opened up to commerce is estimated at over 80,000,000. The products that would bear transportation comprise not only palm-oil and the other common exports of the coast districts, but also rubber in inexhaustible quantities, spices, medicinal herbs, drugs and dye-stuffs, valuable woods, and a variety of other tropical produce. The healthful, elevated regions in the eastern part of the commercial basin of the Congo contain, moreover, bottom-lands of extraordinary fertility and rich grassy plains, affording an attractive prospect for European colonization.

CONGREGATIONALISTS. I. Congregationalists in the United States.—The following is a summary of the statistics of the Congregational Churches in the United States, compiled from the "American Congregational Year-Book" for 1885: Number of churches, 4,092, of which 3,080 are designated as "with pastors" and 1,012 as "vacant"; number of ministers, 3,889, of whom 2,769 are designated as "in pastoral work" and 1,126 as "not in pastoral work"; number of members, 401,549; of additions during the year by profession, 17,923; of baptisms, 8,290 of adults and 5,801 of infants; of persons in Sunday schools, 478,357; of families represented in the churches, 196,106. Amount of contributions, so far as reported: for benevolent objects, in which are included the contributions for foreign missions, for college and educational funds, for the Congregational Union, for home missions, for the American Missionary Association, and for the Congregational Publishing Society, $1,523,924; for home expenditures, $3,884,105. The figures show net gains, during the year, of 82 churches, 5,340 members, and 11,220 persons in Sunday schools. They show, however, a considerable falling off in the amount of collections, but so many of the churches failed to report that it is difficult to make a fair comparative estimate on this point. The seven theological seminaries of Andover, Bangor, Chicago, Hartford, Oberlin, Pacific, and Yale, return 44 professors, 18 instructors or lecturers, 16 members of graduating classes, and 322 students.

American Congregational Union.—The thirty-second annual meeting of the American Congregational Union was held in New York, May 14. The Rev. J. S. Roberts, D. D., presided.

The Treasurer reported that his receipts for the year had been $105,798. The receipts for the parsonage fund, which had been instituted three years before, had been $26,856, and the total receipts from the beginning had been $37,855. The purpose of this fund is to provide for loans upon mortgage security, without interest, to churches, in sums averaging $250 each, for not more than five years, to aid in building parsonages. During the year, grants amounting to $37,025 had been voted to 81 churches; grants amounting to $71,361 had been paid to 91 churches; loans to aid in the erection of parsonages, of $8,350, had been voted to 29 churches, and of $6,345 had been paid to 19 churches. During the last three years the Union had built 284 churches, or an average of 95 each year.

American Home Missionary Society.—The fifty-ninth annual meeting of the American Home Missionary Society was held in Saratoga Springs, N. Y., June 2. The Rev Dr. Julius H. Seelye was chosen President. The total resources of the society for the year had been $462,133. The number of ministers in service was 1,447, and they had been employed in 41 States and Territories, fully or partly supplying 2,990 congregations. Eighty of the ministers had preached in foreign languages, viz., 30 to Welsh, 20 to German, 13 to Scandinavian, 4 to Bohemian, 1 to Hungarian, 1 to Armenian, 1 to Spanish, 1 to Chinese, 3 to Indian, 4 to French, and 2 to Mexican congregations. The number of Sunday-school and Bible scholars was "not far from 118,000." The organization of 306 new schools was reported, and the number under the special care of missionaries was 2,085. The number of additions on confession of faith, so far as reported, was 4,848. One hundred and fifty-five churches had been organized in connection with the labors of the missionaries; 50 churches had assumed their own entire support; 124 houses of worship and 25 chapels had been built, 40 parsonages had been provided, and 79 young men in connection with the missionary churches were preparing for the ministry. Thirteen State Woman's Home Missionary Societies were in action, and co-operating with this body.

American Missionary Association.—The American Missionary Association held its thirty-ninth annual meeting in Madison, Wis., beginning Oct. 27. Ex-Governor W. B. Washburn, of Massachusetts, presided. The total ordinary receipts of the society for the year had been $290,894, and the expenditures had been $306,345. The following is an abstract of the report of the missionary and educational work of the Association: Church work South: Number of churches, 112; of missionaries, 119, of whom 89 are pastors; of members in the mission churches, 6,881; of additions on confession of faith, 883; of Sunday-school pupils, 10,569. Seventeen new churches had been organized, one parsonage had been built, and six new places of worship had been secured. Educational work South: Number of chartered institutions, 6; of normal and graded schools, 14; of common schools, 36; of instructors, 250; of pupils, 8,823. Several new buildings had been secured. A boarding-school for girls had been started at Quitman, Ga. Industrial teaching had been made prominent in many of the schools. It had been given at 16 schools by 10 special industrial teachers, and 21 teachers who combined industrial with other work. The industrial exhibit of the pupils at the Exhibition in New Orleans was considered very gratifying. It included examination papers and specimens in considerable variety of mechanical and artistic work and agricultural products. The "mountain-work"—chiefly among the white population—in Kentucky and Tennessee had been successfully prosecuted. The Williamsburg Academy returned an enrollment of 203 white and colored pupils. Eleven Sunday schools were maintained, with a total enrollment of 1,200 and an average attendance of 750 pupils.

Work among the Indians: Number of churches, 5; of members, 301; of ministers, 7; of schools, 15; of teachers, 53; of pupils, 706; of Sunday-school scholars, 776. This work was carried on chiefly in Nebraska and Dakota, among the Sioux, with the principal stations at Santee, Oahe, and Fort Berthold, on Missouri river. A mission was also sustained at the Skokomish agency, Washington Territory, and a school at Santa Fé, New Mexico.

Work among the Chinese (in California): Number of schools, 18; of missionaries, 38; of pupils enrolled, 1,457; average attendance, 310. These figures show 3 more missions and 12 more missionaries than were returned in the previous year. Four new schools had been opened; 11 Chinese helpers were included in the missionary force. One hundred and seventy-one of the pupils were returned as having ceased from idol-worship.

American Board.—The seventy-fifth annual meeting of the American Board of Commissioners for Foreign Missions was held in Boston, Mass., beginning Oct. 13. The Rev. Mark Hopkins, D. D., presided. The entire receipts of the board for the year, from gifts and ordinary legacies, had been $517,593, showing a slight increase over the receipts of the previous year. The sum of $462,583 had been paid into the treasury from the bequest of Samuel W. Swett, of Jamaica Plains, Mass., and "set apart, to meet special calls for a brief period of years in the evangelistic and educational departments of our missionary work abroad, emphasis being placed upon the present emergency in Japan, and upon the great opportunity in China"; and of this sum $52,992 had been applied, of which $28,791 had been devoted to special calls in Japan, and $6,500 to similar calls in China. From the Otis bequest, set apart by the board for new missions, the sum of $43,884 had been appropriated for the work in central and east central Africa, in Shanse, northern Japan, and northern Mexico. Furthermore, the sum of $11,362 had been contributed, mainly by the children and youth of the Sunday schools, for the building of the new "Morning Star" missionary-ship ($35,986 had been contributed for the same purpose in the previous year). Adding these sums to the amount of regular receipts previously mentioned, the entire receipts for the year would be $625,832. The general permanent fund amounted to $172,047, and the permanent fund for officers to $59,608. The society had a special fund for the support of a home for the children of missionaries, at Auburndale, Mass., which now amounted to $12,117. In the "General Survey" was presented a review of the condition of the missions in Africa, Micronesia, the Hawaiian Islands, the Turkish Empire, India, Japan, China, Spain, Mexico, and Austria. The "General Summary" is as follows:

MISSIONS.

Number of missions	22
Number of stations	83
Number of out-stations	826

LABORERS EMPLOYED.

Number of ordained missionaries * (six being physicians)	156	
Number of physicians not ordained, eight men and four women	12	
Number of other male assistants	6	
Number of women (wives, 147; † unmarried, besides physicians, 101)	248	
Whole number of laborers sent from this country	——	422
Number of native pastors	147	
Number of native preachers and catechists	212	
Number of native school-teachers	1,319	
Number of other native helpers	505—	2,183
Whole number of laborers connected with the missions		2,605

THE PRESS.

Pages printed, as nearly as can be learned	25,000,000

THE CHURCHES.

Number of churches	292
Number of church-members, as nearly as can be learned	23,392
Added during the year, as nearly as can be learned	3,008
Whole number from the first, as nearly as can be learned	94,702

EDUCATIONAL DEPARTMENT.

Number of high-schools, theological seminaries, and station classes	50
Number of pupils in the above	1,981
Number of boarding-schools for girls	40
Number of pupils in boarding-schools for girls	1,690
Number of common schools	803
Number of pupils in common schools	30,941
Whole number of pupils	35,561

The Zulu mission in Africa, having completed its fiftieth year, was preparing to join with the parent society in a public celebration, to be held in December. In the Pacific islands, the Hawaiian Board proposed to enlarge the present force by stationing additional missionaries at new stations in the Marshall Islands and the Caroline Islands. In India, the churches of the Mahratta mission had been self-supporting for three years. A marked change in public sentiment toward the missionary work was noticed in the fact that parents who were not Christians were taking their children to the missionaries and asking that they be taught Christianity. In the city of Madura, a high-school in which the Bible is regularly taught had for a year had an average attendance of 350 pupils, many of them from influential families, and more than half of them Brahmans. Similar schools had been started in other places. In Japan, the first class of thirteen members had been graduated from the theological school at Kioto.

During the seventy-five years since this society was organized, it had sent out 1,866 men and women to missionary work, had formed 396 churches, and received 95,000 church-members, had made a Christian nation of the Hawaiian islands, and had planted vigorous centers of Christian civilization in Turkey, China, Japan, India, and elsewhere. During the past twenty-five years, the breadth of the field occupied, the number of church-members, pastors, and higher schools, and the number of native Christians had increased five-fold.

A message was received from the mission in Syria, which had been founded by this society in 1819, but was now conducted by the Presbyterian Church, expressing "gratitude to God for the work accomplished by the American Board in three fourths of a century, and especially for the work which its missionaries were enabled to do in Syria, in the translation of the Bible into the Arabic language, and in the founding of churches and schools and higher institutions of learning." A letter of greeting was received from a committee of native pastors of churches in Japan. The statement was made, in the special report on the Turkish missions, that "the marvelous fact that Armenians and Greeks are looking to us to instruct them, impresses upon us now the essential importance of giving increased attention to the higher education. Robert College has made a self-governed Bulgaria possible. Who will venture to divine what similarly equipped institutions in Aintab, Harpoot, Marsovan, Mardin, and Midhyal, with American and native professors working as equals side by side, may not do for the Turkish, Armenian, Arabic, and Syrian peoples of Asia Minor and Mesopotamia? Such institutions, thoroughly evangelistic, seeking the conversion of their pupils with their attached theological seminaries and medical schools and hospitals, teaching the English language, which the people must have, we commend to the beneficence of those who wish to do much good with their stewardship." And the report concluded: "The work of the board in Turkey, with its tremendous import for one of the future great Christian empires of the world, calls not for retrenchment, but for efficient enterprise and great enlargement. We add that great outrages, murders and robberies, and other impositions have been committed upon our missionaries in Turkey, which have never

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* Including six still supported at the Hawaiian Islands.

† Including eight at the Hawaiian Islands.

been properly atoned by the Turkish Government, and for which our own Government has never properly sought redress. We wish to express our serious judgment that a much more energetic policy is required, we do not say for the protection of the missionaries, but for the honor of our own country." The meeting resolved, with reference to Japan, that—

Whereas, The progress of Japan during the last twenty years in legislative, civil, and criminal procedure, education, customs, institutions, and religious liberty, now gives reasonable assurance of the adequate protection of the property, the person, and the religious faith of foreigners residing there: therefore,

Resolved, That in accordance with the known wish of the Japanese Government, and the express desire of American missionaries in Japan, our own Government should, by a revision of existing treaties, acknowledge the real progress made in Japan since our first treaty with that country was framed, and that those provisions which exempt the citizens of the United States from the operation of Japanese law should be also revised, with a view to their early abrogation, so far as the interests of Christian civilization may seem to require.

II. Congregationalists in Great Britain.—The Congregational Churches of England and Wales return 2,803 churches, 1,378 stations, and 166 mission stations, with a total of 1,568,357 sittings. A comparison of the returns for the several years shows that since 1851 the number of buildings used for purposes of worship has increased by 1,103, and the number of sittings by 565,850; giving an average increase of 33 buildings and 17,147 sittings per annum.

Congregational Union of England and Wales.—The annual meeting of the Congregational Union of England and Wales was held in London, May 11. The Rev. John Thomas, of Liverpool, presided. Full statistics of the membership of the churches were not presented, but the secretary said that, so far as had been ascertained, there had been an increase of members, and great activity in special mission-work. Resolutions were adopted pressing the subject of the disestablishment and disendowment of the Church, and expressing the hope that the members of the Union would everywhere discharge their electoral duties with fidelity and earnestness, seeking to secure the election of candidates actuated by patriotic and Christian motives. Other resolutions congratulated the Government on the prospect of a peaceful solution of the difficulties with Russia, and extolled its ability and patriotism. The declaration was also recorded that the meeting, "while deprecating all action that would lessen the rights of property, and recognizing the conditions which at the present time control the markets both of labor and material, affirms it to be the duty of every Christian citizen to seek by all means in his power to diminish the inequalities which unjust laws and customs produce in the condition of those who are common members of the state, to endeavor to bring about such changes in the modes of property in land as shall lead to a fairer distribution of it among the people, to a more profitable employment of it in the production of the common good of the people, to the better housing of the poor and the relief of the overcrowding of the cities; and further, that it calls upon every Christian to remember that the so-called laws of trade and economies are not the only rules which should direct the transactions of manufacturers, traders, laborers, and purchasers."

The autumnal meeting of the Union was held at Hanley, beginning Oct. 6. The Rev. Dr. Thomas presided, and spoke in his address on the subject of disestablishment, saying that the Church of England would gain most by that measure. They demanded the separation of religion from the state for the sake of religion itself. As politicians they asked for disestablishment for the sake of the state, and that was the only ground on which the question could be discussed in Parliament. The treasurer of the jubilee funds said that the year's receipts on account of them had been, including certificates, £96,525, and that the balance in hand was now £3,685. In answer to an appeal, £400,000 had been promised, and of that sum £346,000 had been already paid. Besides the usual delegates from the Scottish and Irish Congregational Unions, a delegate was present from the Free Churches Union of Norway. It was decided to send a delegate to the Senate of Free Churches to be held in France in November. A resolution was adopted declaring "that the recent growth of sacerdotalism in the teaching and observances of the Established Church of England, and in the pretensions of some of its clergy, involves, in the judgment of this assembly, great danger to the faith and moral character of the people, and the assembly regards it as incumbent on those who still adhere to the leading doctrines of the apostolic faith to provide against the danger by assiduous inculcation of Scriptural truth in the pulpit, the Sunday school, and the Christian family."

London Missionary Society.—The ninety-first annual meeting of the London Missionary Society was held in London, May 14. Mr. Joseph Ruston, M. P., presided. The total income of the society had been £101,103, and the expenditures £125,218; while the indebtedness had risen to £11,473. Trouble or the apprehension of it had been met in the missions in almost all parts of the world; in Central Africa, in consequence of the war on the Zambesi; in Madagascar and the Loyalty Islands, as a result of the operations of the French; in southern China, from the feeling engendered by the Franco-Chinese war; and in the south Indian stations from cholera. India was regarded as the society's most important field, and complaint was made of the energy with which infidel literature was circulated in that country. An examination of the educational reports of the Indian Government Commission showed that while 2,604,200 pupils, or 2,487,000 boys and 117,200 girls, were under instruction, only 177,000 were taught in mission-schools.

CONGRESS. The second session of the Forty-eighth Congress began Monday, December 1, 1884. After the usual notification from both houses to the President of their readiness for business, the Chief Magistrate sent in his annual message as follows:

To the Congress of the United States:

Since the close of your last session the American people, in the exercise of their highest right of suffrage, have chosen their Chief Magistrate for the four years ensuing.

When it is remembered that at no period in the country's history has the long political contest which customarily precedes the day of the national election been waged with greater fervor and intensity, it is a subject of general congratulation that after the controversy at the polls was over, and while the slight preponderance by which the issue had been determined was as yet unascertained, the public peace suffered no disturbance, but the people everywhere patiently and quietly awaited the result.

Nothing could more strikingly illustrate the temper of the American citizen, his love of order, and his loyalty to law—nothing could more signally demonstrate the strength and wisdom of our political institutions.

Eight years have passed since a controversy concerning the result of a national election sharply called the attention of the Congress to the necessity of providing more precise and definite regulations for counting the electoral vote.

It is of the greatest importance that this question be solved before conflicting claims to the Presidency shall again distract the country, and I am persuaded that, by the people at large, any of the measures of relief thus far proposed would be preferred to continued inaction.

Our relations with all foreign powers continue to be amicable.

With Belgium a convention has been signed whereby the scope of present treaties has been so enlarged as to secure to citizens of either country within the jurisdiction of the other equal rights and privileges in the acquisition and alienation of property. A trade-marks treaty has also been concluded.

The war between Chili and Peru is at an end. For the arbitration of the claims of American citizens who during its continuance suffered through the acts of the Chilian authorities a convention will soon be negotiated.

The state of hostilities between France and China continues to be an embarrassing feature of our Eastern relations. The Chinese Government has promptly adjusted and paid the claims of American citizens whose property was destroyed in the recent riots at Canton. I renew the recommendation of my last annual message, that the Canton indemnity fund be returned to China.

The true interpretation of the recent treaty with that country, permitting the restriction of Chinese immigration, is likely to be again the subject of your deliberations. It may be seriously questioned whether the statute passed at the last session does not violate the treaty rights of certain Chinese who left this country with return certificates valid under the old law, and who now seem to be debarred from relanding for lack of the certificates required by the new.

The recent purchase by citizens of the United States of a large trading fleet heretofore under the Chinese flag has considerably enhanced our commercial importance in the East. In view of the large number of vessels built or purchased by American citizens in other countries and exclusively employed in legitimate traffic between foreign ports under the recognized protection of our flag, it might be well to provide a uniform rule for their registration and documentation, so that the *bona fide* property rights of our citizens therein shall be duly evidenced and properly guarded.

Pursuant to the advice of the Senate at the last session, I recognized the flag of the International Association of the Congo as that of a friendly government, avoiding in so doing any prejudgment of conflicting territorial claims in that region. Subsequently, in execution of the expressed wish of the Congress, I appointed a commercial agent for the Congo Basin.

The importance of the rich prospective trade of the Congo Valley has led to the general conviction that it should be open to all nations upon equal terms. At an international conference for the consideration of this subject called by the Emperor of Germany, and now in session at Berlin, delegates are in attendance on behalf of the United States. Of the results of the conference you will be duly advised.

The Government of Corea has generously aided the efforts of the United States minister to secure suitable premises for the use of the legation. As the conditions of diplomatic intercourse with Eastern nations demand that the legation premises be owned by the represented power, I advise that an appropriation be made for the acquisition of this property by the Government. The United States already possess valuable premises at Tangier as a gift from the Sultan of Morocco. As is stated hereafter, they have lately received a similar gift from the Siamese Government. The Government of Japan stands ready to present to us extensive grounds at Tokio whereon to erect a suitable building for the legation, court-house, and jail, and similar privileges can probably be secured in China and Persia. The owning of such premises would not only effect a large saving of the present rentals, but would permit of the due assertion of extra-territorial rights in those countries, and would the better serve to maintain the dignity of the United States.

The failure of Congress to make appropriation for our representation at the autonomous court of the Khedive has proved a serious embarrassment in our intercourse with Egypt; and in view of the necessary intimacy of diplomatic relationship due to the participation of this Government, as one of the treaty powers in all matters of administration there affecting the rights of foreigners, I advise the restoration of the agency and consulate-general at Cairo on its former basis. I do not conceive it to be the wish of Congress that the United States should withdraw altogether from the honorable position they have hitherto held with respect to the Khedive, or that citizens of this republic residing or sojourning in Egypt should hereafter be without the aid and protection of a competent representative.

With France the traditional cordial relationship continues. The colossal statue of Liberty enlightening the World, the generous gift of the people of France, is expected to reach New York in May next. I suggest that congressional action be taken in recognition of the spirit which has prompted this gift, and in aid of the timely completion of the pedestal upon which it is to be placed.

Our relations with Germany, a country which contributes to our own some of the best elements of citizenship, continue to be cordial. The United States have extradition treaties with several of the German states, but by reason of the confederation of those states under the imperial rule the application of such treaties is not as uniform and comprehensive as the interests of the two countries require. I propose, therefore, to open negotiations for a single convention of extradition, to embrace all the territory of the empire.

It affords me pleasure to say that our intercourse with Great Britain continues to be of a most friendly character.

The Government of Hawaii has indicated its willingness to continue for seven years the provisions of the existing reciprocity treaty. Such continuance, in view of the relations of that country to the American system of states, should, in my judgment, be favored.

The revolution in Hayti against the established government has terminated. While it was in progress it became necessary to enforce our neutrality laws by instituting proceedings against individuals and vessels charged with their infringement. These prosecutions were in all cases successful.

Much anxiety has lately been displayed by various European governments, and especially by the Government of Italy, for the abolition of our import duties upon works of art. It is well to consider whether the present discrimination in favor of the productions of American artists abroad is not likely to result, as they themselves seem very generally to believe it may, in the practical exclusion of our painters and sculptors from the rich fields for observation, study, and labor which they have hitherto enjoyed.

There is prospect that the long-pending revision of the foreign treaties of Japan may be concluded at a new conference to be held at Tokio. While this Government fully recognizes the equal and independent station of Japan in the community of nations, it would not oppose the general adoption of such terms of compromise as Japan may be disposed to offer in furtherance of a uniform policy of intercourse with Western nations.

During the past year the increasing good-will between our own Government and that of Mexico has been variously manifested. The treaty of commercial reciprocity concluded January 20, 1883, has been ratified, and awaits the necessary tariff legislation of Congress to become effective. This legislation will, I doubt not, be among the first measures to claim your attention.

A full treaty of commerce, navigation, and consular rights is much to be desired, and such a treaty I have reason to believe the Mexican Government stands ready to conclude.

Some embarrassment has been occasioned by the failure of Congress at its last session to provide means for the due execution of the treaty of July 29, 1882, for the resurvey of the Mexican boundary and the relocation of boundary monuments.

With the Republic of Nicaragua a treaty has been concluded, which authorizes the construction by the United States of a canal, railway, and telegraph line across the Nicaraguan territory.

By the terms of this treaty sixty miles of the river San Juan, as well as Lake Nicaragua, an inland sea forty miles in width, are to constitute a part of the projected enterprise.

This leaves for actual canal construction seventeen miles on the Pacific side and thirty-six miles on the Atlantic. To the United States, whose rich territory on the Pacific is for the ordinary purposes of commerce practically cut off from communication by water with the Atlantic ports, the political and commercial advantages of such a project can scarcely be overestimated.

It is believed that when the treaty is laid before you the justice and liberality of its provisions will command universal approval at home and abroad.

The death of our representative at Russia while at his post at St. Petersburg afforded to the Imperial Government a renewed opportunity to testify its sympathy in a manner befitting the intimate friendliness which has ever marked the intercourse of the two countries.

The course of this Government in raising its representation at Bangkok to the diplomatic rank has evoked from Siam evidences of warm friendship and augurs well for our enlarged intercourse. The Siamese Government has presented to the United States a commodious mansion and grounds for the occupancy of the legation, and I suggest that by joint resolution Congress attest its appreciation of this generous gift.

This Government has more than once been called upon of late to take action in fulfillment of its international obligations toward Spain. Agitation in the Island of Cuba hostile to the Spanish Crown having been fomented by persons abusing the sacred rights of hospitality which our territory affords, the officers of this Government have been instructed to exercise vigilance to prevent infractions of our neutrality laws at Key West and at other points near the Cuban coast. I am happy to say that in the only instance where these precautionary measures were successfully eluded the offenders, when found in our territory, were subsequently tried and convicted.

The growing need of close relationship of intercourse and traffic between the Spanish Antilles and their natural market in the United States led to the adoption, in January last, of a commercial agreement looking to that end. This agreement has since been superseded by a more carefully framed and comprehensive convention, which I shall submit to the Senate for approval. It has been the aim of this negotiation to open such a favored reciprocal exchange of productions carried under the flag of either country as to make the intercourse between Cuba and Porto Rico and ourselves scarcely less intimate than the commercial movement between our domestic ports, and to insure a removal of the burdens on shipping in the Spanish Indies, of which in the past our ship-owners and ship-masters have so often had cause to complain.

The negotiation of this convention has for a time postponed the prosecution of certain claims of our citizens which were declared to be without the jurisdiction of the late Spanish-American Claims Commission, and which are therefore remitted to diplomatic channels for adjustment. The speedy settlement of these claims will now be urged by this Government.

Negotiations for a treaty of commercial reciprocity with the Dominican Republic have been successfully concluded, and the result will shortly be laid before the Senate.

Certain questions between the United States and the Ottoman Empire still remain unsolved. Complaints on behalf of our citizens are not satisfactorily adjusted. The Porte has sought to withhold from our commerce the right of favored treatment to which we are entitled by existing conventional stipulations, and the revision of the tariffs is unaccomplished.

The final disposition of pending questions with Venezuela has not as yet been reached, but I have good reason to expect an early settlement, which will provide the means of re-examining the Caracas awards in conformity with the expressed desire of Congress, and which will recognize the justice of certain claims preferred against Venezuela.

The Central and South American Commission appointed by authority of the act of July 7, 1884, will soon proceed to Mexico. It has been furnished with instructions, which will be laid before you. They contain a statement of the general policy of the Government for enlarging its commercial intercourse with American states. The commissioners have been actively preparing for their responsible task by holding conferences in the principal cities with merchants and others interested in Central and South American trade.

The International Meridian Conference, lately convened in Washington upon the invitation of the Government of the United States, was composed of representatives from twenty-five nations. The conference concluded its labors on the 1st of November, having with substantial unanimity agreed upon the meridian of Greenwich as the starting-point whence longitude is to be computed through one hundred and eighty degrees eastward and westward, and upon the adoption, for all purposes for which it may be found convenient, of a universal day, which shall begin at midnight on the initial meridian and whose hours shall be counted from zero up to twenty-four.

The formal report of the transactions of this conference will be hereafter transmitted to the Congress.

This Government is in frequent receipt of invitations from foreign states to participate in international exhibitions, often of great interest and importance. Occupying as we do an advanced position in the world's production, and aiming to secure a profitable share for our industries in the general competitive markets, it is a matter of serious concern that the want of means for participation in these exhibitions should so often exclude our producers from advantages enjoyed by those of other countries. During the past year the attention of Congress was drawn to the formal invitations in this regard tendered by the Governments of England, Holland, Belgium, Germany, and Austria. The Executive has in some instances appointed honorary commissioners. This is, however, a most unsatisfactory expedient, for without some provision to meet the necessary working expenses of a commission it can effect little or nothing in behalf of exhibitors. An international inventions exhibition is to be held in London next May. This will cover a field of special importance, in which our country holds a foremost rank, but the Executive is at present powerless to organize a proper representation of our vast national interests in this direction.

I have in several previous messages referred to this subject. It seems to me that a statute, giving to the Executive general discretionary authority to accept such invitations, and to appoint honorary commissioners, without salary, and placing at the disposal of the Secretary of State a small fund for defraying their reasonable expenses, would be of great public utility.

This Government has received official notice that the revised international regulations for preventing collisions at sea have been adopted by all the leading maritime powers except the United States and came into force on the 1st of September last. For the due protection of our shipping interests, the provisions of our statutes should at once be brought into conformity with these regulations.

The question of securing to authors, composers, and artists copyright privileges in this country in return for reciprocal rights abroad, is one that may justly challenge your attention. It is true that conventions will be necessary for fully accomplishing this result, but, until Congress shall by statute fix the extent to which foreign holders of copyright shall be here privileged, it has been deemed inadvisable to negotiate such conventions. For this reason the United States were not represented at the recent conference at Berne.

I recommend that the scope of the neutrality laws of the United States be so enlarged as to cover all patent acts of hostility committed in our territory and aimed against the peace of a friendly nation. Existing statutes prohibit the fitting out of armed expeditions, and restrict the shipment of explosives, though the enactments in the latter respect were not framed with regard to international obligations, but simply for the protection of passenger travel. All these statutes were intended to meet special emergencies that had already arisen. Other emergencies have arisen since, and modern ingenuity supplies means for the organization of hostilities without open resort to armed vessels or to filibustering parties.

I see no reason why overt preparations in this country for the commission of criminal acts, such as are here under consideration, should not be alike punishable, whether such acts are intended to be committed in our own country or in a foreign country with which we are at peace.

The prompt and thorough treatment of this question is one which intimately concerns the national honor.

Our existing naturalization laws also need revision. Those sections relating to persons residing within the limits of the United States in 1795 and 1798 have now only an historical interest. Section 2172, recognizing the citizenship of the children of naturalized parents, is ambiguous in its terms, and partly obsolete. There are special provisions of law favoring the naturalization of those who served in the army or in merchant vessels, while no similar privileges are granted those who serve in the navy or the Marine Corps.

"A uniform rule of naturalization," such as the Constitution contemplates, should, among other things, clearly define the status of persons born within the United States subject to a foreign power (R. S. sec. 1992), and of minor children of fathers who have declared their intention to become citizens, but have failed to perfect their naturalization. It might be wise to provide for a central bureau of registry, wherein should be filed authenticated transcripts of every record of naturalization in the several Federal and State courts, and to make provision also for the vacation or cancellation of such record in cases where fraud had been practiced upon the court by the applicant himself, or where he had renounced or forfeited his acquired citizenship. A just and uniform law in this respect would strengthen the hands of the Government in protecting its citizens abroad, and would pave the way for the conclusion of treaties of naturalization with foreign countries.

The legislation of the last session effected in the diplomatic and consular service certain changes and reductions which have been productive of embarrassment. The population and commercial activity of our country are steadily on the increase, and are giving rise to new, varying, and often delicate relationships with other countries. Our foreign establishment now embraces nearly double the area of operations that it occupied twenty years ago. The confinement of such a service within the limits of expenditure then established is not, it seems to me, in accordance with true economy. A community of 60,000,000 of people should be adequately represented in its intercourse with foreign nations.

A project for the reorganization of the consular service, and for recasting the scheme of extra-territorial jurisdiction, is now before you. If the limits of a short session will not allow of its full consideration, I trust that you will not fail to make suitable provision for the present needs of the service.

It has been customary to define in the appropriation acts the rank of each diplomatic office to which a salary is attached. I suggest that this course be abandoned, and that it be left to the President, with the advice and consent of the Senate, to fix from time to time the diplomatic grade of the representatives of this Government abroad as may seem advisable, provision being definitely made, however, as now, for the amount of salary attached to the respective stations.

The condition of our finances, and the operations of the various branches of the public service which are connected with the Treasury Department, are very fully discussed in the report of the Secretary.

It appears that the ordinary revenues for the fiscal year ended June 30, 1884, were—

From customs	$195,067,489 76
From internal revenue	121,586,072 51
From all other sources	31,866,307 65
Total ordinary revenues	$348,519,869 92

The public expenditures during the same period were—

For civil expenses	$22.312,907 71
For foreign intercourse	1,260,766 37
For Indians	6,475,999 29
For pensions	55,429,228 06
For the military establishment, including river and harbor improvements and arsenals	39,429,603 36
For the naval establishment, including vessels, machinery, and improvements at navy-yards	17,292,601 44
For miscellaneous expenditures, including public buildings, light-houses, and collecting the revenue	43,939,710 00
For expenditures on account of the District of Columbia	3,407,049 62
For interest on the public debt	54,578,378 48
For the sinking fund	46,790,229 50
Total ordinary expenditures	$290,916,473 83
Leaving a surplus of	$57,603,396 09

As compared with the preceding fiscal year, there was a net decrease of over $21,000,000 in the amount of expenditures. The aggregate receipts were less than those of the year previous by about $54,000,000. The falling off in revenue from customs made up nearly $20,000,000 of this deficiency, and about $23,000,000 of the remainder was due to the diminished receipts from internal taxation.

The Secretary estimates the total receipts for the fiscal year which will end June 30, 1885, at $330,000,000, and the total expenditures at $290,620,201.16, in which sum are included the interest on the debt, and the amount payable to the sinking fund. This would leave a surplus for the entire year of about $39,000,000.

The value of exports from the United States to foreign countries during the year ending June 30, 1884, was as follows:

Domestic merchandise	$724,964.852
Foreign merchandise	15,548,757
Total merchandise	$740,513,609
Specie	67,133,383
Total exports of merchandise and specie	$807,646,992

The cotton and cotton manufactures included in this statement were valued at $208,900,415; the breadstuffs at $162,544,715; the provisions at $114,416,547, and the mineral oils at $47,103,248.

During the same period the imports were as follow:

Merchandise	$667,697,693
Gold and silver	37,426,262
Total	$705,123,955

More than 63 per cent. of the entire value of imported merchandise consisted of the following articles:

Sugar and molasses	$103,884,274
Wool and woolen manufactures	53.542,292
Silk and its manufactures	49,949,128
Coffee	49,686,705
Iron and steel and manufactures thereof	41,464,599
Chemicals	38,464,965
Flax, hemp, jute, and like substances, and manufactures thereof	33,463,398
Cotton and manufactures of cotton	30,454,476
Hides and skins other than fur-skins	22,350,906

I concur with the Secretary of the Treasury in recommending the immediate suspension of the coinage of silver dollars, and of the issuance of silver certificates. This is a matter to which in former communications I have more than once invoked the attention of the National Legislature.

It appears that annually for the past six years there have been coined, in compliance with the requirements of the act of Feb. 28, 1878, more than twenty-seven million silver dollars. The number now outstanding is reported by the Secretary to be nearly one hundred and eighty-five million, whereof but little more than forty million, or less than 22 per cent., are in actual circulation. The mere existence of this fact seems to me to furnish of itself a cogent argument for the repeal of the statute which has made such fact possible.

But there are other and graver considerations that tend in the same direction.

The Secretary avows his conviction that unless this coinage and the issuance of silver certificates be suspended, silver is likely at no distant day to become our sole metallic standard. The commercial disturbance and the impairment of national credit that would be thus occasioned can scarcely be overestimated.

I hope that the Secretary's suggestions respecting the withdrawal from circulation of the one-dollar and two-dollar notes will receive your approval. It is likely that a considerable portion of the silver now encumbering the vaults of the Treasury might thus find its way into the currency.

While trade-dollars have ceased, for the present at least, to be an element of active disturbance in our currency system, some provision should be made for their surrender to the Government. In view of the circumstances under which they were coined and of the fact that they have never had a legal-tender quality, there should be offered for them only a slight advance over their bullion value.

The Secretary, in the course of his report, considers the propriety of beautifying the designs of our subsidiary silver coins and of so increasing their weight that they may bear their due ratio of value to the standard dollar. His conclusions in this regard are cordially approved.

In my annual message of 1882 I recommended the abolition of all excise taxes except those relating to distilled spirits. This recommendation is now renewed. In case these taxes shall be abolished, the revenues that will still remain to the Government will, in my opinion, not only suffice to meet its reasonable expenditures, but will afford a surplus large enough to permit such tariff reduction as may seem to be advisable when the results of recent revenue laws and commercial treaties shall have shown in what quarters those reductions can be most judiciously effected.

One of the gravest of the problems which appeal to the wisdom of Congress for solution is the ascertainment of the most effective means for increasing our foreign trade and thus relieving the depression under which our industries are now languishing. The Secretary of the Treasury advises that the duty of investigating this subject be intrusted in the first instance to a competent commission. While fully recognizing the considerations that may be urged against this course, I am nevertheless of the opinion that, upon the whole, no other would be likely to effect speedier or better results.

That portion of the Secretary's report which concerns the condition of our shipping interests can not fail to command your attention. He emphatically recommends that, as an incentive to the investment of American capital in American steamships, the Government shall by liberal payments for mail transportation, or otherwise, lend its active assistance to individual enterprise, and declares his belief that unless that course be pursued our foreign carrying-trade must remain, as it is to-day, almost exclusively in the hands of foreigners.

One phase of this subject is now especially prominent, in view of the repeal by the act of June 26, 1884, of all statutory provisions arbitrarily compelling American vessels to carry the mails to and from the United States. As it is necessary to make provision to compensate the owners of such vessels for performing that service after April, 1885, it is hoped that the whole subject will receive early consideration, that will lead to the enactment of such measures for the revival of our merchant marine as the wisdom of Congress may devise.

The 3 per cent. bonds of the Government to the amount of more than $100,000,000 have since my last annual message been redeemed by the Treasury. The bonds of that issue still outstanding amount to little over $200,000,000, about one fourth of which will be retired through the operations of the sinking fund during the coming year. As these bonds still constitute the chief basis for the circulation of the national banks, the question how to avert the contraction of the currency caused by their retirement is one of constantly increasing importance.

It seems to be generally conceded that the law governing this matter exacts from the banks excessive security, and that upon their present bond deposits a larger circulation than is now allowed may be granted with safety. I hope that the bill which passed the Senate at the last session permitting the issue of notes equal to the face value of the deposited bonds will commend itself to the approval of the House of Representatives.

In the expenses of the War Department the Secretary reports a decrease of more than $9,000,000. Of this reduction $5,600,000 was effected in the expenditures for rivers and harbors and $2,700,000 in expenditures for the Quartermaster's Department.

Outside of that department the annual expenses of all the army bureaus proper (except possibly the Ordnance Bureau) are substantially fixed charges, which can not be materially diminished without a change in the numerical strength of the army. The expenditures in the Quartermaster's Department can readily be subjected to administrative discretion, and it is reported by the Secretary of War that as a result of exercising such discretion, in reducing the number of draught and pack animals in the army, the annual cost of supplying and caring for such animals is now $1,108,085.90 less than it was in 1881.

The reports of military commanders show that the last year has been notable for its entire freedom from Indian outbreaks.

In defiance of the President's proclamation of July 1, 1884, certain intruders sought to make settlements in the Indian Territory. They were promptly removed by a detachment of troops.

During the past session of Congress a bill to provide a suitable fire-proof building for the Army Medical Museum and the Library of the Surgeon-General's Office received the approval of the Senate. A similar bill, reported favorably to the House of Representatives by one of its committees, is still pending before that body. It is hoped that during the coming session the measure may become a law, and that thereafter immediate steps may be taken to secure a place of safe deposit for these valuable collections, now in a state of insecurity.

The funds with which the works for the improvement of rivers and harbors were prosecuted during the past year were derived from the appropriations of the act of August 2, 1882, together with such few balances as were on hand from previous appropriations. The balance in the Treasury subject to requisition July 1, 1883, was $10,021,649.55. The amount appropriated during the fiscal year 1884 was $1,319,634.62, and the amount drawn from the Treasury during the fiscal year was $8,228,703.54, leaving a balance of $3,112,580.63 in the Treasury subject to requisition July 1, 1884.

The Secretary of War submits the report of the Chief of Engineers as to the practicability of protecting our important cities on the seaboard by fortifications and other defenses able to repel modern methods of attack. The time has now come when such defenses can be prepared with confidence that they will not prove abortive; and, when the possible result of delay in making such preparation is seriously considered, delay seems inexcusable. For the most important cities—those whose destruction or capture would be a national humiliation—adequate defenses, inclusive of guns, may be made by the gradual expenditure of $60,000,000; a sum much less than a victorious enemy could levy as a contribution. An appropriation of about one tenth of that amount is asked to begin the work, and I concur with the Secretary of War in urging that it be granted.

The War Department is proceeding with the conversion of 10-inch smooth-bore guns into 8-inch rifles, by lining the former with tubes of forged steel or of coiled wrought-iron. Fifty guns will be thus converted within the year. This, however, does not obviate the necessity of providing means for the construction of guns of the highest power, both for the purposes of coast defense and for the armament of war-vessels.

The report of the gun-foundry board, appointed April 2, 1883, in pursuance of the act of March 3, 1883, was transmitted to Congress in a special message of February 18, 1884. In my message of March 26, 1884, I called attention to the recommendation of the board that the Government should encourage the production at private steel-works of the required material for heavy cannon, and that two Government factories, one for the army and one for the navy, should be established for the fabrication of guns from such material. No action having been taken, the board was subsequently reconvened to determine more fully the plans and estimates necessary for carrying out its recommendation. It has received information which indicates that there are responsible steel manufacturers in this country who, although not provided at present with the necessary plant, are willing to construct the same and to make bids for contracts with the Government for the supply of the requisite material for the heaviest guns adapted to modern warfare if a guaranteed order of sufficient magnitude, accompanied by a positive appropriation extending over a series of years, shall be made by Congress. All doubts as to the feasibility of the plan being thus removed, I renew my recommendation that such action be taken by Congress as will enable the Government to construct its own ordnance upon its own territory, and so to provide the armaments demanded by considerations of national safety and honor.

The report of the Secretary of the Navy exhibits the progress which has been made on the new steel cruisers authorized by the acts of August 5, 1882, and March 3, 1883. Of the four vessels under contract, one, the Chicago, of 4,500 tons, is more than half finished; the Atlanta, of 3,000 tons, has been successfully launched, and her machinery is now fitting; the Boston, also of 3,000 tons, is ready for launching; and the Dolphin, a dispatch steamer of 1,500 tons, is ready for delivery.

Certain adverse criticisms upon the designs of these cruisers are discussed by the Secretary, who insists that the correctness of the conclusions reached by the advisory board and by the department has been demonstrated by recent developments in ship-building abroad.

The machinery of the double-turreted monitors Puritan, Terror, and Amphitrite, contracted for under the act of March 3, 1883, is in process of construction. No work has been done during the past year on their armor for lack of the necessary appropriations. A fourth monitor, the Monadnock, still remains unfinished at the navy-yard in California. It is recommended that early steps be taken to complete these vessels, and to provide also an armament for the monitor Miantonomoh.

The recommendations of the naval advisory board, approved by the department, comprise the construction of one steel cruiser of 4,500 tons, one cruiser of 3,000 tons, two heavily armed gunboats, one light cruising gunboat, one dispatch-vessel armed with Hotchkiss cannon, one armored ram, and three torpedo-boats. The general designs, all of which are calculated to meet the existing wants of the service, are now well advanced, and the construction of the vessels can be undertaken as soon as you shall grant the necessary authority.

The act of Congress approved August 7, 1882, authorized the removal to the United States of the bodies of Lieutenant-Commander George W. De Long and his companions of the Jeannette expedition. This removal has been successfully accomplished by Lieutenants Harber and Schuetze. The remains were taken from their grave in the Lena Delta in March, 1883, and were retained at Yakutsk until the following winter, the season being too far advanced to admit of their immediate transportation. They arrived at New York February 20, 1884, where they were received with suitable honors.

In pursuance of the joint resolution of Congress approved February 13, 1884, a naval expedition was fitted out for the relief of Lieutenant A. W. Greely, United States Army, and of the party who had been engaged under his command in scientific observations at Lady Franklin Bay. The fleet consisted of the steam-sealer Thetis, purchased in England; the Bear, purchased at St. John's, Newfoundland; and the Alert, which was generously provided by the British Government. Preparations for the expedition were promptly made by the Secretary of the Navy, with the active co-operation of the Secretary of War. Commander George W. Coffin was placed in charge of the Alert, and Lieutenant William H. Emory in command of the Bear. The Thetis was intrusted to Commander Winfield S.

Schley, to whom was also assigned the superintendence of the entire expedition.

Immediately upon its arrival at Upernavik, the fleet began the dangerous navigation of Melville Bay, and in spite of every obstacle reached Littleton Island on June 22, a fortnight earlier than any vessel had before attained that point. On the same day it crossed over to Cape Sabine, where Lieutenant Greely and the other survivors of his party were discovered. After taking on board the living and the bodies of the dead the relief-ships sailed for St. John's, where they arrived on July 17. They were appropriately received at Portsmouth, N. H., on August 1, and at New York on August 8. One of the bodies was landed at the former place. The others were put on shore at Governor's Island, and, with the exception of one which was interred in the national cemetery, were forwarded thence to the destinations indicated by friends. The organization and conduct of this relief expedition reflect great credit upon all who contributed to its success.

In this the last of the stated messages that I shall have the honor to transmit to the Congress of the United States, I can not too strongly urge upon its attention the duty of restoring our navy as rapidly as possible to the high state of efficiency which formerly characterized it. As the long peace that has lulled us into a sense of fancied security may at any time be disturbed, it is plain that the policy of strengthening this arm of the service is dictated by considerations of wise economy, of just regard for our future tranquillity, and of true appreciation of the dignity and honor of the republic.

The report of the Postmaster-General acquaints you with the present condition and needs of the postal service.

It discloses the gratifying fact that the loss of revenue from the reduction in the rate of letter-postage recommended in my message of December 4, 1882, and effected by the act of March 3, 1883, has been much less than was generally anticipated. My recommendation of this reduction was based upon the belief that the actual falling off in receipts from letter-postages for the year immediately succeeding the change of rate would be $3,000,000. It has proved to be only $2,275,000.

This is a trustworthy indication that the revenue will soon be restored to its former volume, by the natural increase of sealed correspondence.

I confidently repeat, therefore, the recommendation of my last annual message, that the single-rate postage upon drop letters be reduced to one cent wherever the payment of two cents is now required by law. The double rate is only exacted at offices where the carrier system is in operation, and it appears that at those offices the increase in the tax upon local letters defrays the cost not only of its own collection and delivery, but of the collection and delivery of all other mail matter. This is an inequality that ought no longer to exist.

I approve the recommendation of the Postmaster-General that the unit of weight in the rating of first-class matter should be one ounce instead of one half ounce as it now is. In view of the statistics furnished by the department it may well be doubted whether the change would result in any loss of revenue; that it would greatly promote the convenience of the public is beyond dispute.

The free-delivery system has been lately applied to five cities, and the total number of offices in which it is now in operation is one hundred and fifty-nine. Experience shows that its adoption, under proper conditions, is equally an accommodation to the public and an advantage to the postal service. It is more than self-sustaining, and for the reasons urged by the Postmaster-General may properly be extended.

In the opinion of that officer it is important to provide means whereby exceptional dispatch in dealing with letters in free-delivery offices may be secured by payment of extraordinary postage. This scheme might be made effective by employment of a special stamp, whose cost should be commensurate with the expense of the extra service.

In some of the large cities private express companies have undertaken to outstrip the Government mail-carriers, by affording for the prompt transmission of letters better facilities than have hitherto been at the command of the Post-Office.

It has always been the policy of the Government to discourage such enterprises, and in no better mode can that policy be maintained than in supplying the public with the most efficient mail service that, with due regard to its own best interests, can be furnished for its accommodation.

The Attorney-General renews the recommendation contained in his report of last year touching the fees of witnesses and jurors.

He favors radical changes in the fee bill, the adoption of a system by which attorneys and marshals of the United States shall be compensated solely by salaries, and the erection by the Government of a penitentiary for the confinement of offenders against its laws.

Of the varied governmental concerns in charge of the Interior Department the report of its Secretary presents an interesting summary. Among the topics deserving particular attention I refer you to his observations respecting our Indian affairs, the pre-emption and timber-culture acts, the failure of railroad companies to take title to lands granted by the Government, and the operations of the Pension-Office, the Patent-Office, the Census Bureau, and the Bureau of Education.

Allusion has been made already to the circumstance that, both as between the different Indian tribes and as between the Indians and the whites, the past year has been one of unbroken peace.

In this circumstance the President is glad to find justification for the policy of the Government in its dealing with the Indian question, and confirmation of the views which were fully expressed in his first communication to the Forty-seventh Congress.

The Secretary urges anew the enactment of a statute for the punishment of crimes committed on the Indian reservations, and recommends the passage of the bill now pending in the House of Representatives for the purchase of a tract of 18,000 square miles from the Sioux reservation. Both these measures are worthy of approval.

I concur with him also in advising the repeal of the pre-emption law, the enactment of statutes resolving the present legal complications touching lapsed grants to railroad companies, and the funding of the debt of the several Pacific railroads under such guarantee as shall effectually secure its ultimate payment.

The report of the Utah commission will be read with interest.

It discloses the results of recent legislation looking to the prevention and punishment of polygamy in that Territory. I still believe that if that abominable practice can be suppressed by law it can only be by the most radical legislation consistent with the restraints of the Constitution.

I again recommend, therefore, that Congress assume absolute political control of the Territory of Utah, and provide for the appointment of commissioners, with such governmental powers as in its judgment may justly and wisely be put into their hands.

In the course of this communication reference has more than once been made to the policy of this Government as regards the extension of our foreign trade. It seems proper to declare the general principles that should, in my opinion, underlie our national efforts in this direction.

The main conditions of the problem may be thus stated:

We are a people apt in mechanical pursuits and fertile in invention; we cover a vast extent of territory rich in agricultural products and in nearly all the raw materials necessary for successful manufacture; we have a system of productive establishments more than sufficient to supply our own demands; the wages of labor are nowhere else so great; the scale of living of our artisan classes is such as tends to secure their personal comfort and the development of those higher moral and intellectual qualities that go to the making of good citizens. Our system of tax and tariff legislation is yielding a revenue which is in excess of the present needs of the Government.

These are the elements from which it is sought to devise a scheme by which, without unfavorably changing the condition of the working-man, our merchant marine shall be raised from its enfeebled condition and new markets provided for the sale beyond our borders of the manifold fruits of our industrial enterprises.

The problem is complex, and can be solved by no single measure of innovation or reform.

The countries of the American continent and the adjacent islands are for the United States the natural marts of supply and demand. It is from them that we should obtain what we do not produce or do not produce in sufficiency, and it is to them that the surplus productions of our fields, our mills, and our workshops should flow, under conditions that will equalize or favor them in comparison with foreign competition.

Four paths of policy seem to point to this end:

First, a series of reciprocal commercial treaties with the countries of America, which shall foster between us and them an unhampered movement of trade. The conditions of these treaties should be the free admission of such merchandise as this country does not produce in return for the admission free or under a favored scheme of duties of our own products—the benefits of such exchange to apply only to goods carried under the flag of the parties to the contract; the removal, on both sides, from the vessels so privileged of all tonnage dues and national imposts, so that those vessels may ply unhindered between our ports and those of the other contracting parties, though without infringing on the reserved home coasting trade; the removal or reduction of burdens on the exported products of those countries coming within the benefits of the treaties; and the avoidance of the technical restrictions and penalties by which our intercourse with those countries is at present hampered.

Secondly, the establishment of the consular service of the United States on a salaried footing, thus permitting the relinquishment of consular fees not only as respects vessels under the national flag, but also as respects vessels of the treaty nations carrying goods entitled to the benefits of the treaties.

Thirdly, the enactment of measures to favor the construction and maintenance of a steam carrying-marine under the flag of the United States.

Fourthly, the establishment of a uniform currency basis for the countries of America, so that the coined products of our mines may circulate on equal terms throughout the whole system of commonwealths. This would require a monetary union of America, whereby the output of the bullion-producing countries and the circulation of those which yield neither gold nor silver could be adjusted in conformity with the population, wealth, and commercial needs of each. As many of the countries furnish no bullion to the common stock, the surplus production of our mines and mints might thus be utilized and a step taken toward the general remonetization of silver.

To the accomplishment of these ends, so far as they can be attained by separate treaties, the negotiations already concluded and now in progress have been directed, and the favor which this enlarged policy has thus far received warrants the belief that its operations will ere long embrace all, or nearly all, the countries of this hemisphere.

It is by no means desirable, however, that the policy under consideration should be applied to these countries alone. The healthful enlargement of our trade with Europe, Asia, and Africa should be sought by reducing tariff burdens on such of their wares as neither we nor the other American states are fitted to produce, and thus enabling ourselves to obtain in return a better market for our supplies of food, of raw materials, and of the manufactures in which we excel.

It seems to me that many of the embarrassing elements in the great national conflict between protection and free trade may thus be turned to good account—that the revenue may be reduced so as no longer to overtax the people; that protective duties may be retained without becoming burdensome; that our shipping interests may be judiciously encouraged, the currency fixed on firm bases, and above all such a unity of interests established among the states of the American system as will be of great and ever-increasing advantage to them all.

All treaties in the line of this policy which have been negotiated or are in process of negotiation contain a provision deemed to be requisite under the clause of the Constitution limiting to the House of Representatives the authority to originate bills for raising revenue.

On the 29th of February last I transmitted to the Congress the first annual report of the Civil-Service Commission, together with communications from the heads of the several Executive Departments of the Government respecting the practical workings of the law under which the commission had been acting. The good results therein foreshadowed have been more than realized.

The system has fully answered the expectations of its friends in securing competent and faithful public servants and in protecting the appointing officers of the Government from the pressure of personal importunity, and from the labor of examining the claims and pretensions of rival candidates for public employment.

The law has had the unqualified support of the President and of the heads of the several departments, and the members of the commission have performed their duties with zeal and fidelity. Their report will shortly be submitted, and will be accompanied by such recommendations for enlarging the scope of the existing statute as shall commend themselves to the Executive and the commissioners charged with its administration.

In view of the general and persistent demand throughout the commercial community for a national bankrupt law, I hope that the differences of sentiment which have hitherto prevented its enactment may not outlast the present session.

The pestilence which for the past two years has been raging in the countries of the East recently made its appearance in European ports with which we are in constant communication.

The then Secretary of the Treasury, in pursuance of a proclamation of the President, issued certain regulations restricting, and for a time prohibiting, the importation of rags and the admission of baggage of immigrants and of travelers arriving from infected quarters. Lest this course may have been without strict warrant of law, I approve the recommendation of the present Secretary that the Congress take action in the premises, and I also recommend the immediate adoption of such measures as will be likely to ward off the dreaded epidemic, and to mitigate its severity in case it shall unhappily extend to our shores.

The annual report of the commissioners of the District of Columbia reviews the operations of the several departments of its municipal government. I ask your careful consideration of its suggestions in respect to legislation—especially commending such as relate to a revision of the civil and criminal code, the performance of labor by persons sentenced to imprisonment in the jail, the construction and occupation of wharves along the river front, and the erection of a suitable building for District offices.

I recommend that, in recognition of the eminent services of Ulysses S. Grant, late General of the armies of the United States and twice President of this nation, the Congress confer upon him a suitable pension.

Certain of the measures that seem to me necessary and expedient I have now, in obedience to the Constitution, recommended for your adoption.

As respects others of no less importance, I shall content myself with renewing the recommendations already made to the Congress, without restating the grounds upon which such recommendations were based.

The preservation of forests on the public domain, the granting of Government aid for popular education, the amendment of the Federal Constitution so as to make effective the disapproval by the President of particular items in appropriation bills, the enactment of statutes in regard to the filling of vacancies in the Presidential office, and the determining of vexed questions respecting Presidential inability, are measures which may justly receive your serious consideration.

As the time draws nigh when I am to retire from the public service, I can not refrain from expressing to the members of the National Legislature with whom I have been brought into personal and official intercourse my sincere appreciation of their unfailing courtesy and of their harmonious co-operation with the Executive in so many measures calculated to promote the best interests of the nation.

And to my fellow-citizens generally I acknowledge a deep sense of obligation for the support which they have accorded me in my administration of the executive department of this Government.

Chester A. Arthur.

Washington, *December* 1, 1884.

The Election at Cincinnati.—Dec. 2, 1884, in the House of Representatives, Mr. Follett, of Ohio, introduced, as a privileged question, the following:

> I do impeach Lot Wright, United States Marshal of the Southern District of Ohio, of high crimes and misdemeanors.
>
> I charge him with usurpation of power and violation of law:
>
> In that he appointed a large number of general and special deputy-marshals to serve at the several voting precincts in the city of Cincinnati, in the State of Ohio, at an election for members of Congress held in said city on the 14th day of October, A. D. 1884, and armed said deputy-marshals with pistols and other deadly weapons said to have been furnished by the War Department of the United States Government;
>
> In that a large number of the deputy-marshals so appointed and armed were notorious criminals and men of known vicious and brutal habits and reputation, and many of them non-residents of said city of Cincinnati and of said State of Ohio;
>
> In that the said deputy-marshals, acting under his orders and directions, aided, abetted, and encouraged fraudulent voting, intimidation of voters, and gross outrages upon the elective franchise and the rights of the honest voters of said city in furtherance of the interests of a political party and its candidates: Therefore,
>
> *Resolved*, That the Committee on Expenditures in the Department of Justice be required and directed, as soon as the same can reasonably be done, to investigate such charges and report to this House:
>
> 1. How many deputy-marshals, general and special, were appointed and authorized by said United States Marshal for the Southern District of Ohio to serve at the several voting precincts of said city at said election, with the name and residence of each and the voting precinct to which each was assigned.
>
> 2. What citizens, if any, of said several precincts asked for the appointment of such deputy-marshals, with the names of such citizens and the reasons, if any were assigned, for such request.
>
> 3. Whether any, and, if so, how many, of such deputy-marshals have, prior to such appointment, been accused or convicted of crime, or were men of known vicious and brutal habits and reputations.
>
> 4. Whether said deputy-marshals were under the direction and control of partisans, and used the powers vested in them in the interest of any political party, and aided, countenanced, and encouraged fraudulent and illegitimate voting in the interest of such political party and its candidates.
>
> 5. What number and what kind of pistols or other deadly weapons were put into the hands of said deputy-marshals, who furnished the said weapons, from whence were they received, why furnished, and how many of such weapons have been returned, together with the names of such deputy-marshals as have failed to return the weapons furnished them.
>
> 6. What amount of money has been paid to such deputy-marshals, and by whose order was the same paid, and at what rate per day.
>
> 7. Any other matter or thing connected with or germane to the general subject of such investigation.
>
> *Resolved*, That in making such investigation the said committee be empowered to appoint a sub-committee of three, consisting of the chairman of said committee and such other two members thereof as he may select, which sub-committee shall have full power to meet and hold its sessions at such times and places as may seem proper, to send for persons and papers, to compel the attendance of witnesses and to require them to testify, to employ a stenographer, and to incur any and all such necessary and reasonable expenditures as may be deemed requisite for the purposes of such investigation, such expenditures to be paid out of the contingent fund of the House.

Mr. Keifer, of Ohio, objected to the consideration of the subject, on the ground that no question of privilege was presented. If the resolutions were an impeachment, they were privileged; but if they merely provided for an investigation into the official conduct of a United States officer, they were not privileged. And he claimed that these resolutions were simply designed to cover an investigation. The objection was overruled, on the ground that the paper presented by Mr. Follett followed the form observed previously in impeachment cases. On the motion to adopt the so-called articles of impeachment the previous question was called, and during the limited debate that preceded the vote the Republicans urged the necessity of extending the scope of the investigation so as to take in all the circumstances of the Cincinnati election and cover the action of State, county, and municipal authorities; such a course the Democrats refused to sanction. Mr. Keifer, of Ohio, said:

"I apprehend, Mr. Speaker, that it will be no great risk at prophecy to say that when these resolutions are adopted and when the committee goes to work, when the sub-committee is sent out to the city of Cincinnati or to the Southern District of Ohio to commence this investigation, that committee will commence a political investigation from the first, and that it will there end in just such an investigation. Feeling that that is all that is going to be accomplished, we were very desirous that there might be considered here, by means of the report that would come from that committee, the whole situation as it appeared in that great panorama that was exhibited in Cincinnati on the 14th day of October last and the few days prior to that time. I think it would be very important, before we are prepared in this house to impeach the United States Marshal at Cincinnati, that we should know the whole situation surrounding that officer at the time he undertook what I allege to be all that he undertook to do, to wit, to provide that there should be a peaceable election, that all persons of all races properly citizens of the United States might go and cast their ballots. I would like it to appear, if such be the case, that at the very time these deputy-marshals were appointed in Cincinnati there were going about the streets of that city officers, claiming at least to be officers of that municipal corporation, seizing men simply because they were colored men, and carrying them off and putting them in the station-houses and locking them up by the hundred, keeping them there until the polls closed on the 14th day of October, and then turning them out without any charges of any kind against them. I may not be entirely correct, but the newspapers undertake to tell us that there were in one station-house over three hundred colored men at one time, against whom there was no charge alleged at all, and that they lay there in that station-house all through election-day, being kept there in order that they should not go to the polls and vote.

"Now, it ought to be known what was the condition of things surrounding this United States officer who had certain duties cast upon him under the laws of the United States, and I would like this investigation to be broad enough and full enough to bring to us and lay before us all the circumstances that surrounded him. This might help us to determine whether or not he acted wisely and prudently, in the light of the great responsibility which was thrown upon him, when he appointed an unusually large number of special deputy-marshals. It might also enable us to tell whether or not this officer acted within the proper scope of his legal power when he directed his special deputy-marshals to go to the polls and do their duty resolutely under all circumstances. While I am not going to object in any sense to the investigation here proposed, I would like it to be thorough and complete. It might be well enough for this committee when they go out to Cincinnati, when they are taking this testimony, to find how many persons have been indicted for violating the laws of the United States in the manner which I have indicated—how many persons a grand jury, having as its foreman a distinguished Democrat of Cincinnati, has indicted for seizing men on the street and imprisoning them for no other reason and no other purpose in the world than to prevent them from voting—how many have been convicted after fair trial for this kind of crime. A presentation of such facts might enable us to tell whether or not an honest, able, resolute officer of the United States, clothed with power under the law, acted wisely in appointing a very considerable number of men to go to the polls and see that peace, quiet, and order were preserved there.

"Mr. Speaker, I am one of those who believe that no peaceable, quiet citizen of the United States, North or South, is ever injured by having a strong peace power around the ballot-box on election-day. Only such persons as go to the polls to create riot and disorder, and prevent others from voting peaceably and quietly, ever object to a strong power at the polls on election-day for the protection of voters. In years gone by I have raised my voice here and elsewhere in favor of such protection to the rights of voters. I have voted in the direction of having a strong power to protect the quiet, peaceable voter everywhere in the United States.

"I believe in the power of the United States in all national matters. Gentlemen on the other side of the house have but recently upon the public rostrum boasted of their readiness and willingness to go, with all the power and strength of the United States, into foreign lands and upon foreign seas to protect a citizen of the United States whenever he should be wronged or harmed in any way. I would go as far as he who goes the farthest in that direction. But I also believe in protecting a citizen of the United States under the flag of the United States and within its boundaries. Therefore I believe in an honest, fair, resolute power exhibited, when the law authorizes it, to preserve peace and quiet and order at elections in the United States, and whether violations of law of a character to prevent a peaceable citizen from voting may exist in Ohio, in Mississippi, or in South Carolina, I would apply everywhere the same rule and the same power."

Mr. Follett, of Ohio, on the other hand, said: "Now, Mr. Speaker, before this election was held, this marshal was waited upon by citizens of Ohio, with the request that he should disclose what his intentions were for the election-day, and that he should co-operate with the State officers for the purpose of securing a fair and honest election. He said, in his immaculate dignity, as an officer of the United States, that if the mayor of our city and the other persons whose duty it was to see that there was a fair election saw fit to wait upon him, his majesty would be at his office at certain hours in the day. One of these citizens, the president of one of our leading railroads, one of the most prominent citizens of Cincinnati, replied to him in strong and vigorous language: 'Were I the Mayor of Cincinnati, I would see you in a hot place before I did so. Your little dignity assuming to control the affairs of the State of Ohio! And your office greater than that of the Mayor of Cincinnati!'

"Now, Mr. Speaker, there were there on that day, decorated with marshals' badges, men professing and glorying in the cognomen of the 'Terror of Black Hills'—men just out of the penitentiary from the State of Kentucky—men who were seen and known to be residents of other States. It has been said here that the United States court is prosecuting one side only. That is true. The marshal of the United States knowingly brought persons from outside the State and decorated them with marshals' badges; but no Government officer prefers a charge against him or brings complaint before a grand jury. But, sir, here is a law of the United States. The majesty of that law is invoked; and any poor fellow who attempted to clear the road to the ballot-box, that he might get there and deposit his vote, if he interfered with one of these deputy-marshals standing between him and the ballot-box, is immediately arrested, brought before the United States court, and punished in accordance with that law for interfering with the United States deputy-marshals.

"Gentlemen on the other side say that we want to suppress investigation. On the contrary, these resolutions provide for the widest possible scope in this investigation. So far as the marshal is concerned, God knows I would not prevent him from making any excuse, if excuse he has, for the conduct which disgraced the city of Cincinnati and the election upon the 14th of last October. But, sir, when an officer of the United States puts himself into the hands and under the control of that distinguished citizen of New York, John I. Davenport (my friend from New York knows who he is), and such distinguished citizens as Powell Clayton, of Arkansas, who was there the whole day giving instructions; such distinguished citizens as Mr. Filley, whose character is known to the gentleman from Missouri; such distinguished citizens as many who congregate about this Capitol during the sessions of Congress—such men as McElfresh; such distinguished citizens as one who, I blush to say, has been an officer of the United States, a man who has presided over the Pension Department of this Government, the chief detective of that department, who for two weeks was there setting up the job to do exactly what was done, to perpetrate a fraud upon the people, to make that fraud possible and successful—when such men as these control and govern an officer of the United States for the purpose of accomplishing such results, when by such means as these I am counted out of a seat in Congress, it is not my loss that is to be considered—for that I care not—it is the country's threatened destruction, the stab at liberty which you have given by that act."

The resolutions were adopted without a division, and the committee submitted a report March 3, 1885, at the close of the session.

Inter-State Commerce.—Dec. 2, 1884, a bill for the establishment of a Board of Commissioners of Inter-State Commerce, and for the regulation of such commerce, came up for consideration in the House of Representatives, and the subject occupied much of the attention of Congress during the session, a bill for the same purpose coming up in the Senate two days later. In the House, Mr. Reagan, of Texas, brought forward the bill reported by the Committee on Commerce at the previous session, but never considered, and moved to substitute a measure of his own therefor. The committee's bill was as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all charges by any person or persons engaged alone or associated with others in the transportation of property by railroad from one State or Territory to or through one or more other States or Territories of the United States, or to or from any foreign country, shall be reasonable for such service.

Section 2. That it shall be unlawful for any person or persons so engaged as aforesaid directly or indirectly to charge to or receive from any person or persons any greater or less rate or amount of compensation or reward than is by him or them charged to or received from any other person or persons for like and contemporaneous service in the carrying, receiving, delivering, storing, or handling the same under substantially similar circumstances; and all persons engaged as aforesaid shall furnish, without discrimination, the same facilities for the carriage, receiving, delivery, storage, and handling of all property of like character carried by him or them, and shall perform with equal expedition the same kind of services connected with the contemporaneous transportation thereof as aforesaid. No break, stoppage, or interruption, nor any contract, agreement, or understanding, shall be made to prevent the carriage of any property from being and being considered as one continuous carriage, in the meaning of this act, from the place of shipment to the place of destination, unless such stoppage, interruption, contract, arrangement, or understanding was made in good faith for some practical and necessary purpose, without any intent to avoid or interrupt such continuous carriage, or to evade any of the provisions of this act.

Sec. 3. That it shall be unlawful for any person or persons engaged in the transportation of property as aforesaid directly or indirectly to allow any rebate, drawback, or other advantage in any form, upon shipments made or services rendered as aforesaid by him or them, which, under similar circumstances, are not allowed to all other persons.

Sec. 4. That it shall be unlawful for any person or persons engaged in the carriage, receiving, storage, or handling of property as mentioned in the first section of this act to enter into any combination, contract, or agreement, by changes of schedule, carriage in different cars, or by any other means, with intent to prevent the carriage of such property from being continuous from the place of shipment to the place of destination, whether carried on one or several railroads; and it shall be unlawful for any person or persons carrying property as aforesaid to enter into any contract, agreement, or combination for the pooling of freights, or to pool the freights, of different and competing railroads, by dividing between them the aggregate or net proceeds of the earnings of such railroads, or any portion of them.

Sec. 5. That the provisions of this act shall apply to all property, and the receiving, delivery, loading, unloading, handling, storing, or carriage of the same, on one actually or substantially continuous carriage, or as part of such continuous carriage, as provided for in the first section of this act, and the compensation therefor, whether such property be carried wholly on one railroad or partly on several railroads, and whether such services are performed, or compensation paid or received by or to one person alone, or in connection with another or other persons.

Sec. 6. That any railroad company, officer of such company, or other person who shall violate any of the provisions of this act, shall be liable to any person injured for the actual damages caused by such violation, which may be recovered in any State or United States court of competent jurisdiction. The court before which any such action is tried, if it shall be found that the violation was willful, or continued after the notice provided by the tenth section of this act, shall make an allowance by way of additional costs to the party injured sufficient to cover all his counsel and attorney fees, and all expenses and disbursements in the action, including his own necessary personal expenses.

Sec. 7. That any corporation or person violating this act is guilty of a misdemeanor, and subject to a fine of not exceeding $1,000 for each violation. The courts of the United States shall have exclusive jurisdiction of all prosecutions arising under this section. It shall be the duty of district attorneys of the United States to institute and prosecute to effect criminal proceedings for all such violations. The provisions of this section shall not apply to the first section of this act.

Sec. 8. That there shall be appointed by the President, by and with the advice and consent of the Senate, three commissioners, of whom one shall be of experience in the law and one of experience in railroad business, who shall be collectively known as the commission of interstate commerce of the United States, and shall be charged with the duty of carrying into effect the provisions of this act in respect of interstate commerce. One of said commissioners shall hold his office for the term of two years, one for the term of four years, and the other for the term of six years, to be respectively designated by the President, and thereafter said commissioners shall be appointed for the term of six years; and a commissioner appointed to any vacancy shall hold office for the unexpired term. Any one of said commissioners may be removed by the President for cause, but not otherwise. Said commissioners shall devote their whole time and abilities to the duties of their office, and shall not accept or engage in any office or employment inconsistent with the provisions of this act. If either commissioner, after his appointment, shall be, or shall become by inheritance or operation of law, pecuniarily interested in any railroad or railroad security, he shall, within thirty days, divest himself of such interest; and upon his failure to do so, or upon his voluntarily becoming interested in any such railroad or railroad security, his office shall become vacant. No commissioner shall participate in any hearing or proceeding in which he has any pecuniary interest whatever. Each commissioner shall receive an annual salary of $7,500, payable like the salaries of the judges of the courts of the United States: *Provided*, That before entering upon the discharge of their duties they shall, in addition to the oath required of them by law, take and subscribe to an oath that they are neither directly nor indirectly interested in the ownership or earnings of any railroad company whatsoever.

Sec. 9. That the said commission shall exercise only the powers by this act conferred. Said commission may appoint a clerk, whose duty it shall be to keep a full and faithful record of the proceedings of said commission, and otherwise to assist the members thereof in the performance of their duties, and who shall receive an annual salary of $2,500; and also one accountant, at an annual salary of $2,500. The Secretary of the Interior, at the request of said commission, may also furnish the commission such additional clerical, engineering, expert, or other service as they may request and he shall deem proper. Actual and necessary traveling and other expenses incurred by said commissioners, or their employés under their orders, shall be allowed them, for which vouchers shall be rendered. The commissioners, their experts and clerks, may pass and repass over any railroad engaged in interstate commerce free of charge, whenever engaged in the performance of their duties under the provisions of this act, but neither shall accept any other pass, gratuity, or favor whatever from any railroad company.

Sec. 10. That any person complaining of anything done or omitted to be done by any railroad company or person in violation or contravention of this act may, in addition to the remedies hereinbefore provided, apply to said commission by petition in writing, which shall briefly state the subject of such complaint. If the petition is signed by any board of trade or other commercial body, or, when signed by an individual, if it bears the certificate of any district attorney of the United States, or of any district or county attorney, or officer corresponding thereto, of any State or Territory, that he has examined the facts, and in his opinion the complaint is well founded, the commission is hereby required to entertain and investigate the same. In all other cases the commission shall decide whether or not the petition ought to be proceeded with. The commission may, if they think fit, before requiring or permitting any formal proceedings to be taken on any petition, communicate the same to the railroad company against whom it is made, so as to afford them an opportunity of making such observations or taking such action thereon as they may think fit. The commission shall have power, and in a proper case is required, to cause a copy of the petition to be served upon the railroad company complained against, and to issue a notice requiring such company to appear before the commission and answer the said petition. The answer shall be in writing. After the answer is filed it shall then be lawful for the commission, if it shall think fit, to direct and prosecute, in such mode and by such persons or means as it shall think proper, all such inquiries into matters of fact as may be deemed necessary to enable the commission to form a just conclusion in respect of the matters of said petition. All the proceedings before said commission shall be directed by and under general orders, which shall secure to all persons interested reasonable notice and opportunity to be heard. If it shall be made to appear to the satisfaction of the commission, either by the testimony of witnesses or other evidence adduced before it, or by the report of any person to whom the commission may have referred the inquiry, or any part thereof, that anything has been done or omitted to be done in contravention or violation of this act, by any railroad company or person so upon due and proper notice proceeded against, it shall be the duty of such commission to make and record its report in writing in respect of any such contravention or violation of this act, which report shall comprise and embrace the findings of the commission upon and in respect of all questions of fact in issue or involved in such proceedings. Within a reasonable time, not to exceed twenty days, after such report and findings are made by the commission, it shall cause a copy thereof to be served upon or delivered to the railroad company so found to have violated this act, to which shall be appended a notice to be issued by said commission to such company forthwith to cease and desist from such violation; and also to deliver to the district attorney of the United States for the district in which the act complained of occurred another copy of such report, findings, and notice.

Sec. 11. That upon notice that any such railroad company has neglected or refused to conform to the decision of said commission, and to desist from such violation or contravention of this act, it shall be the duty of such district attorney to apply by petition, in the name of the party aggrieved, to the Circuit Court of the United States for such district, for, and it shall be the duty of such court to grant, an order upon such railroad company to show cause why such company should not be enjoined and restrained against the continuance of such violation, and for such other order and relief in the premises as may be just and proper. For the purpose of making any order or decree in the premises, final or otherwise, such court shall be always open, and the day on which any such order or decree is made shall be a special term of such court. Upon the service and return of such order to show cause, and notice to the parties interested, such court shall proceed in a summary manner to ascertain whether the said report and findings are true; and whenever said court shall be of opinion that such company has done or is doing any act in violation or contravention of this act in said report and findings described, it shall so adjudge; and it then shall be the duty of said court forthwith to issue a writ of injunction, requiring such railroad company to desist from such violation, and in respect of the matters in said report contained to conform to and obey all the provisions of said act. Such court may enforce obedience to any such injunction, order, or decree, by any person or party, by fine, proceedings for contempt, and all other means within its lawful jurisdiction sitting as a court of equity. Any person interested to restrain such violation may, on application to the court, be allowed to appear and be heard by himself or counsel; and upon proof that any district attorney has failed in any proper case for the period of ten days to apply for such order to show cause, the court may permit such application to be made and prosecuted to effect by or in behalf of any person so interested. Such court may, in its discretion, award or deny costs to any party to such proceeding. In any case where the court shall adjudge that the violation of this act by any company has been willful, or continued after notice to desist therefrom, the court may award to any party injured such a gross sum by way of costs as will reimburse all his costs, charges, expenses, counsel fees, and disbursements, to be paid by such company.

Sec. 12. That the commission may make, and from time to time amend, such general orders as may be requisite for the order and regulation of proceedings before it, including all forms for proceeding, notices and the service thereof, and for the prescribing, directing, or regulating any matters authorized by this act. All the proceedings before said commission shall be upon reasonable notice to all parties interested, and such forms shall conform as nearly as may be to those in use in the courts of the United States. Any party may appear and be heard in person or by attorney.

Sec. 13. That for the purposes of this act the commission shall, subject as in this act mentioned, have full power to ascertain and report upon all questions of fact arising under this act, and shall also have the powers following:

(*a*) They may, by subpœna or order to be served by a person by them authorized, require the attendance of witnesses, and of all such persons as they think fit to call before them, or before any person by them authorized to prosecute an inquiry.

(*b*) They may require the production of all books, papers, and documents relating to any matter before them, and to that end may invoke the aid of any court of the United States.

(*c*) Either of them may administer oaths and affirmations.

Sec. 14. That the principal office of the commission shall be in the city of Washington, where its general session shall be held and its records and archives be deposited. Whenever the convenience of the public or of the parties may be promoted, or delay or expense prevented thereby, the commission may hold special sessions in any part of the United States. It may, by one or more of the commissioners, or one of the persons named in the ninth section hereof, or by any person specially appointed by the commission, prosecute any inquiry necessary to its duties, in any part of the United States, into any matter or question of fact, and may specially delegate to the officer or person conducting such inquiry such powers to that end as are by this act conferred upon the commission and may be deemed necessary. Every vote and official act of either of the commissioners shall be entered of record. The commission may conduct its proceedings in such a manner as will most conduce to the dispatch of business and to justice; they may sit together or separately, and either in private or public, but any proceeding before them shall be public upon the request of either party thereto; and a majority of said commission may determine any question submitted. The commission shall prescribe a railroad year, and a system of reports covering said year to be rendered by railroad companies; examine the books and accounts of said companies at such times as may be deemed by them necessary; see that all United States laws relating to said companies are enforced; furnish such information to the several departments of the Government, or the Government directors of any of said railroads, in regard to the tariffs of fares and freight, or the accounts of said railroads, as may be required of them or as they may deem expedient; make an annual report of their doings to Congress on or before the first day of January of each year; and otherwise endeavor to procure the data necessary to the gradual enactment of an intelligent system of national legislation regulating interstate railroad commerce.

Sec. 15. That the Secretary of the Interior shall provide suitable offices and a room for the public sessions of the commission in the city of Washington. Witnesses summoned before the commission shall be paid the same fees as witnesses in the Federal courts, and depositions *de bene esse* and under commission may be taken to be used before the commission in the same manner and upon the same conditions as in such courts. The salaries and expenses of the commission shall be provided for, audited, and paid in the same manner as the salaries of judges and other judicial expenses.

Sec. 16. That said board of commissioners shall inquire into that method of railroad management or combination known as pooling, and state the result of their inquiry in their first annual report, and whether, in their judgment, any, and if so what, legislation is expedient in relation thereto.

Sec. 17. That nothing in this act shall apply to the carriage, storage, or handling of property wholly within one State or Territory and not destined for continuous carriage beyond such State or Territory, or to property carried for the United States, or to the transportation of persons or articles free or at reduced rates for State or municipal governments or for charitable purposes, or to or from public fairs and expositions for exhibition thereat.

Sec. 18. That in the construction of this act the phrases "railroad corporation" and "railroad company" shall be held to be synonymous, and to signify a corporation which either owns or operates a railroad as aforesaid, and shall include receivers, lessees, and trustees operating railroads, and all persons named in the first section of this act. The word "person" in this act includes plurality of persons, corporate and incorporate, and all persons in any manner engaged in interstate railway commerce in whatever capacity, whether as principals, agents, or employés.

Sec. 19. That the sum of $40,000, or so much thereof as may be necessary, is hereby appropriated for the uses and purposes of this act for the fiscal year ending June 30, a. d. 1885, and the intervening time anterior thereto.

Mr. Reagan's proposed substitute was as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it shall be unlawful for any person or persons engaged alone or associated with others in the transportation of property by railroad from one State or Territory to or through one or more other States or Territories of the United States, or to or from any foreign country, directly or indirectly to charge to or receive from any person or persons any greater or less rate or amount of freight, compensation, or reward than is charged to or received from any other person or persons for like and contemporaneous service in the carrying, receiving, delivering, storing, or handling of the same. All charges for such services shall be reasonable. And all persons engaged as aforesaid shall furnish, without discrimination, the same facilities for the carriage, receiving, delivery, storage, and handling of all property of like character carried by him or them, and shall perform with equal expedition the same kind of services connected with the contemporaneous transportation thereof as aforesaid. No break, stoppage, or interruption, nor any contract, agreement, or understanding shall be made to prevent the carriage of any property from being and being treated as one continuous carriage, in the meaning of this act, from the place of shipment to the place of destination, unless such stoppage, interruption, contract, arrangement, or understanding was made in good faith for some practical and necessary purpose, without any intent to avoid or interrupt such continuous carriage or to evade any of the provisions of this act.

SEC. 2. That it shall be unlawful for any person or persons engaged in the transportation of property as aforesaid directly or indirectly to allow any rebate, drawback, or other advantage, in any form, upon shipments made or services rendered as aforesaid by him or them.

SEC. 3. That it shall be unlawful for any person or persons engaged in the carriage, receiving, storage, or handling of property as mentioned in the first section of this act to enter into any combination, contract, or agreement, by changes of schedule, carriage in different cars, or by any other means, with intent to prevent the carriage of such property from being continuous from the place of shipment to the place of destination, whether carried on one or several railroads. And it shall be unlawful for any person or persons carrying property as aforesaid to enter into any contract, agreement, or combination for the pooling of freights, or to pool the freights, of different and competing railroads, by dividing between them the aggregate or net proceeds of the earnings of such railroads, or any portion of them.

SEC. 4. That it shall be unlawful for any person or persons engaged in the transportation of property as provided in the first section of this act to charge or receive any greater compensation for a similar amount and kind of property, for carrying, receiving, storing, forwarding, or handling the same, for a shorter than for a longer distance on any one railroad; and the road of a corporation shall include all the road in use by such corporation, whether owned or operated by it under a contract, agreement, or lease by such corporation.

SEC. 5. That all persons engaged in carrying property as provided in the first section of this act shall adopt and keep posted up schedules which shall plainly state:

1. The different kinds and classes of property to be carried.

2. The different places between which such property shall be carried.

3. The rates of freight and prices of carriage between such places, and for all services connected with the receiving, delivery, loading, unloading, storing, or handling the same. And the accounts for such service shall show what part of the charges are for transportation, and what part are for loading, unloading, and other terminal facilities.

Such schedules may be changed from time to time as hereinafter provided. Copies of such schedules shall be printed in plain, large type, at least the size of ordinary pica, and shall be kept plainly posted for public inspection in at least two places in every depot where freights are received or delivered; and no such schedule shall be changed in any particular except by the substitution of another schedule containing the specifications above required, which substitute schedule shall plainly state the time when it shall go into effect, and copies of which, printed as aforesaid, shall be posted as above provided at least five days before the same shall go into effect; and the same shall remain in force until another schedule shall as aforesaid be substituted. And it shall be unlawful for any person or persons engaged in carrying property on railroads as aforesaid, after thirty days after the passage of this act, to charge or receive more or less compensation for the carriage, receiving, delivery, loading, unloading, handling, or storing of any of the property contemplated by the first section of this act than shall be specified in such schedule as may at the time be in force.

SEC. 6. That each and all of the provisions of this act shall apply to all property, and the receiving, delivery, loading, unloading, handling, storing, or carriage of the same, on one actually or substantially continuous carriage, or as part of such continuous carriage, as provided for in the first section of this act, and the compensation therefor, whether such property be carried wholly on one railroad or partly on several railroads, and whether such services are performed or compensation paid or received by or to one person alone or in connection with another or other persons.

SEC. 7. That each and every act, matter, or thing in this act declared to be unlawful is hereby prohibited; and in case any person or persons as defined in this act, engaged as aforesaid, shall do, suffer, or permit to be done any act, matter, or thing in this act prohibited or forbidden, or shall omit to do any act, matter, or thing in this act required to be done, or shall be guilty of any violation of the provisions of this act, such person or persons shall forfeit and pay to the person or persons who may sustain damage thereby a sum equal to three times the amount of the damages so sustained, to be recovered by the person or persons so damaged by suit in any State or United States court of competent jurisdiction where the person or persons causing such damage can be found or may have an agent, office, or place of business; and if the court before which any such action is tried shall be of opinion that the violation of the law was willful, it shall make an allowance, by way of additional costs, to the party injured sufficient to cover all his counsel and attorney fees. Any action to be brought as aforesaid may be considered, and if so brought shall be regarded, as a subject of equity jurisdiction and discovery, and affirmative relief may be sought and obtained therein. In any such action so brought as a case of equitable cognizance as aforesaid, any director, officer, receiver, or trustee of any corporation or company aforesaid, or any receiver, trustee, or person aforesaid, or any agent of any such corporation or company, receiver, trustee, or person aforesaid, or of any of them, alone or with any other person or persons, party or parties, may and shall be compelled to attend, appear, and testify and give evidence; and no claim that any such testimony or evidence might or might not tend to criminate the person testifying or giving evidence shall be of any avail, but such evidence or testimony shall not be used as against such person on the trial of any indictment against him. The attendance and appearance of any of the persons who as aforesaid may be compelled to appear or testify, and the giving of the testimony or evidence by the same, respectively, and the production of books and papers thereby, may and shall be compelled the same as in the case of any other witness; and in case any deposition or evidence, or the production of any books or papers, may be desired or required for the purpose of applying for or sustaining any such action, the same, and the production of books and papers, may and shall be had, taken, and compelled by or before any United States commissioner, or in any manner provided or to be provided for as to the taking of other depositions or evidence, or the attendance of witnesses, or the production of other books or papers, in or by chapter 17 of title 13 of the Revised Statutes of the United States. No action aforesaid shall be sustained unless brought within one year after the cause of action shall accrue, or within one year after the party complaining shall have come to a knowledge of his right of action.

And as many causes of action as may accrue within the year may be joined in the same suit or complaint.

SEC. 8. That any director or officer of any corporation or company acting or engaged as aforesaid, or any receiver or trustee, lessee, or person acting or engaged as aforesaid, or any agent of any such corporation or company, receiver, trustee, or person aforesaid, or of one of them alone, or with any other corporation, company, person or party, who shall willfully do, or cause or willingly suffer or permit to be done, any act, matter, or thing in this act prohibited or forbidden, or who shall aid or abet therein, or shall willfully omit or fail to do any act, matter, or thing in this act required to be done, or cause or willingly suffer or permit any act, matter, or thing so directed or required by this act to be done not to be so done, or shall aid or abet any such omission or failure, or shall be guilty of any infraction of this act, or aid or abet therein, shall be guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than $1,000.

SEC. 9. That nothing in this act shall apply to the carriage, receiving, storage, handling, or forwarding of property wholly within one State, and not shipped from or destined to some foreign country or other State or Territory; nor shall it apply to property carried for the United States at lower rates of freight and charges than for the general public, or to the transportation of articles free or at reduced rates of freight for charitable purposes, or to or from public fairs and expositions for exhibition.

SEC. 10. That the words "person or persons" as used in this act, except where otherwise provided, shall be construed and held to mean person or persons, officer or officers, corporation or corporations, company or companies, receiver or receivers, trustee or trustees, lessee or lessees, agent or agents, or other person or persons acting or engaged in any of the matters and things mentioned in this act.

Concerning the proposition to appoint a commission, Mr. Reagan said:

"If it is the judgment of the House that we should have a commission on this subject, I shall, of course, bow to the decision of the House. But I doubt the expediency of providing for such a commission, and will state why. If we provide for the appointment of a railroad commission either by the President or any other authority (and if provided for it would seem most natural that the members should be appointed by the President), however honest and patriotic his intentions may be in making such appointments, we must remember that the railroad corporations, few in number as to the heads that control them, can easily combine their influence and bring to bear by indirection, if they dare not do it directly, influences which will be likely to control in the appointment of commissioners.

"If we get commissioners appointed in the interest of these corporations, we can hardly expect either recommendations or direct action that will materially benefit the people.

"It has been said that it was difficult even to get the representatives of the people to act on this great question. We know the power of these corporations (with their experts and other officers filling the committee-rooms and corridors, and often placing themselves upon the floor of this house with their attorneys, the ablest in the United States, all of them paid out of the people's money by levying a little more tribute upon the people) to secure or prevent legislation. If Congress has found now for nine years the impossibility of legislating upon this great question, what is to be the fate of the people if their interests are left in the hands of three men upon whom all these influences can be concentrated? I do not deny that it may be possible to secure men who will be faithful to the great trust committed to them; but to undertake to perform the duties of such a commission would expose any men to the severest trials that can be imposed upon them.

"My friend from Iowa asks me if I can point out the difference in point of difficulty between getting honest commissioners and the difficulty of getting honest judges. I do not know that I can point out the difference in such a way as will be satisfactory to him. But judges are appointed with reference to the general legal powers which they are to exercise, while these commissioners would be appointed with reference to the specific duties provided for in this act relating to railroads. Judges have many motives in connection with subjects of jurisdiction other than railroads to preserve their integrity. I have said I do not doubt that it is possible to get men who will act fairly in this capacity. But, in my judgment, when we look at what has occurred in the majority of the States that have appointed commissioners, when we remember that State Legislatures have been suborned, that courts of justice have been corrupted, that even Governors of States have been improperly influenced in their action by the power of these corporations, we should rather trust the rights of the people in the hands of the courts of the country than commit them to three particular individuals, whose jurisdiction at most can only be partial.

"But I propose now, Mr. Speaker, to antagonize this idea of a commission by providing that certain things shall not be done, and that the doing of them shall be a violation of the law, and that certain things shall be done, and the non-doing of these things shall be a violation of law. I propose to give a civil remedy to the party injured, in the State or Federal court where these parties or their officers can be found, in civil damages for the wrong done. I propose to give a criminal remedy in the courts of the United States for the same wrongs where the penalty on conviction shall not be less than $1,000."

Mr. Long, of Massachusetts, said of the general scope of the committee's bill:

"Mr. Speaker, the Committee on Commerce agree that legislation is demanded and is desirable on the subject of interstate railroad transportation. They differ only as to the method of procedure. In discussing the bill which they have reported, it is as important not to get up steam against evils, which it is not our province to remedy, as to consider how most effectually to cure those which we ought to reach. There is no subject of easier declamation, or at which the impassioned orator can fire his gun with a louder report on a small charge of powder, than the railroad system of the country. But for the purpose of this debate I do not believe it is profitable to call that system either an angel of beneficence or a monster of iniquity. We all know that it has developed our country, turned the wilderness to a garden, peopled our great territorial domain into flourishing States, belted the republic together, cheapened transportation, and, best of all, laid at the feet of the poorest citizen, by means of mutual and prosperous exchange, the products, whether of shop or farm, of every section of the Union. On the other hand, we all know that it has been the raw material, if that term shall offend no sensitive ear, of wild and ruinous speculation, and that the red blood of its stocks has often been watered till in too many cases it has only swashed a bloated corpse, offensive to the nose and damaging to health.

"But the question before us is not a question of speculation in railroad investments or of watered stocks. Be the evils that thence arise as grievous as the plagues of Egypt, they are not for us to remedy. Thanks to our Federal Constitution of blessed memory, they lie within the jurisdiction of the States which create railroad corporations and regulate their existence and financial operation.

"Nor is it a question directly of political power or of local monopolization; nor is it ours to attempt any Utopian scheme of leveling the inequalities of human fortune. These exist by natural laws, which are practically beyond our legislative and artificial control.

"It is certainly a good rule in legislation to let alone as much as possible, not to contend against but to co-operate with natural laws—especially the laws of competition—and to leave them to work out their own results till the necessity of interference is plain. I take it we are not here to make a raid on railroads simply because, as a sort of public institution, they are accessible and easy of assault, any more than on any of the great private businesses of the country, which often quite as sharply affect the pockets of the people and even more brutally burden them. Indeed, in this whole matter of the railroad hearing, which for two months during the winter we had before our committee, what struck me more than anything else, was not only the entire absence of any outcry against the railroads from the people at large, but also the limited complaint from anybody else.

"There has been complaint, and, let me say, just complaint, especially in former years, but it has generally come from the middle-men of commerce, who stand between the producer and the consumer, and who, having to share profits with the railroad carrier, naturally and properly incline to reduce as much as possible his charges, in order, as he flings back, to increase their own.

"The statistics show a steadily improving diminution of rates in the interest of the people. Look at some of the figures. The $6,000,000,000 or more invested in the 125,000 miles of railroads in the United States pay only about 3 per cent. per annum to their stockholders. The rate of freight ten years ago was 2½ cents per ton per mile. This year, under what is charged as the enormities of the railroad monopoly, it has come down to less than 1 cent per ton per mile. We were told that in Belgium and France it is nearly twice that, and in England still more. Under the operation of natural laws evils have tended to cure themselves, rates have come down, discriminations have lessened. This has happened because it is found with public institutions as with individuals, that the nearer the approach to square and fair dealing the better it pays in the long run, although human selfishness and corporate soullessness both learn the lesson slowly and reluctantly. There are no saints running our railroads. On the contrary, there is there, as everywhere else, a body of selfish, timid—as capital subject to legislation is always timid—but prudent men, and in obedience to their own interest, if to nothing else, they are wisely more and more consulting, and more and more meeting every year, the public demand, and doing more justice to the public.

"As Edward Atkinson, a good statistical authority, says, the voluntary reduction in railroad rates in the last twelve years, not forced by law but resulting from natural causes, is greater than the whole sum of the public debt. The development of the West, the value of its herds and farms and crops, the rescue of its corn from voluntary commission to the flames and its transfer to the remunerative markets of the world, are due to the cheap transportation of the railroads; a cheapness for the great realms of the Western people which has been secured somewhat, indeed, at the cost of local high rates, especially in the East, but, in the main, has aided in the distribution and cheapening of food for all the people who buy it, and who, in exchange for it, find a market for their own manufactured products. Our railroads, says the United States Railroad Commissioner, employ nearly 2,000,000 persons in their operation and construction, thus furnishing vast employment to labor. We were told that they cost less per mile for construction, even with the tariff on railroad iron and steel rails, than those of any of the great European countries; about one fourth of those of England, and one third of those of France. A barrel of flour is hauled from Chicago to New York, 1,000 miles, for 30 cents. If a man eats one pound a day, the transportation charge for him is less than $1 a year. The freight on meat from Chicago to New York is 32½ cents per 100 pounds. If a man eats one pound a day, its transportation costs him $1.20 a year, or about one day's wages for the transportation of his year's bread and meat.

"In other words, Mr. Speaker, the evil is not that of general extortion upon the country, except as those discriminations and preferences, to which I shall afterward refer as the real grievance, increase the general cost, as perhaps they do to a slight extent, by favoring some at the expense of others. The competition of railroads among themselves, and the abundant water-ways which it ought to be the sagacious policy of Congress to develop and improve, reduce the general rates of freight to a reasonable price, which still goes on constantly diminishing; and the United States Railroad Commissioner says in his report that ours is the cheapest railroad transportation in the world.

"What is the evil, then, at which we should direct legislation? It is the evil of unjust discrimination and undue preferences. Rates are generally reasonable and on the whole generous to the people. But there have been, less now than formerly, as and for the reasons I have stated, unjust, indefensible, harassing, and impolitic discriminations, which, so far as they affect interstate commerce, it is our province to correct. While I have less faith than some in the utility of legislative restrictions, I yet believe the time has arrived when, in obedience to public sentiment as well as to the actual demands of business, especially the demands of our mercantile houses and middle-men, something can be done by statutory enactments."

In defense of a commission, Mr. Long said:

"A corporation may be as powerful as an ancient baron, it may laugh at statutory penalties, but it goes on its knees, it trembles with terror at entire exposure. Nothing can stand the illumination of the public gaze. This has been the tendency in Massachusetts, and it is to be remembered that the board there has been made up of men from the ordinary walks of life, so that the success has been more in the system than in the men who work it, important and vital as is the choice of these. Mr. Adams, now a distinguished railroad authority, was nothing of the sort when he went upon that board. To-day one member sits upon it, who, to his credit, was promoted as a practical man, representing the railroad operatives, from the cab of a locomotive. And that commission, of which Judge Russell is now the able chairman, is a safeguard and protection to our people such as mere cast-iron statutes—aud we have them lying rust-eaten and forgotten on our statute-book—could never effect. Indeed, I do not recall an instance where these statutes, with their idle thunders, have been invoked, while the commission is constantly called upon to express its quiet but ever-obeyed influence.

"I admit that in some States a commission has not succeeded, while in more it has, thus showing that in the former the conditions and not the principle have been at fault. I also admit that in so great a sphere as the interstate commerce of the whole country this system will not fulfill its work if the best men be not selected to constitute the board. But in view of the vast importance of the trust and its jurisdiction, I know and you know that public sentiment will demand and find such men, whoever be the appointng power. Thank God, an independent public opinion has secured a hold in this country that compels, in the great business interests of the people, something more than favoritism or partisanship. With such a choice as Adams, Cooley, Thurman, and a score of others who might be named, this bill would furnish a remedy that would set in motion the true diagnosis and cure of the railroad evil. Much as I differ on many points from the distinguished chairman of our committee, Judge Reagan, I would sooner, as a measure of legislative relief, constitute him sole railroad commissioner, responsible to Congress, than merely enact his list of bristling and fulminating prohibitions and penalties and nothing more.

"In the one case we should at least have honest and attentive regulation and oversight; in the other, only the echo of a threat as empty as the dungeon of a mediæval castle. If we are to put the railroads under restraint against unjust discriminations and undue preferences, as I think we should, I want it to be a restraint that means something and that is constantly in operation. Such would certainly not be the result if we merely passed a penal statute and left it to execute itself in rare spasms.

"Consider the great value and advantage of the reports to Congress and the country of a commission made up of such men as I have suggested, of the steady growth of the science of remedial regulation, and of the gradual subordination of the railroad power to salutary and beneficent obedience to the supremacy of the popular will as expressed and manifested by these responsible agents of the national Government.

"Compare with this elastic, self-adjusting, and sufficient system the stunted and utterly ineffectual method of a dormant statute, too expensive and too like a boomerang for any poor shipper, whose property is at the mercy of the humor of the railroads, to set in motion. To furnish him only that would be to give the people a stone when they cry for bread, a serpent when they ask for fish. Better to give him the constant backing of a commission. I believe that those who best appreciate the necessity of reform and most thoroughly have studied the problem have little faith in Judge Reagan's plan of an iron-clad statute, with its overweight of prohibitions and penalties, through which the railroad lawyer would drive his coach-and-six, and to which the people, especially the men of small means, would no more resort than they would risk their fingers in a chopping-machine to save a run-away nickel. And yet, in order to give the people a bill, in order to make sure of having every string to our bow, in order to meet every aspect of the case and give the railroads no rope or quarter, the Committee on Commerce have united in prefacing to the sections establishing a commission with full powers a number of sections embracing as many of Judge Reagan's provisions as a majority of us regarded practicable. We have omitted none that we think the judgment of the country will demand in this new and tentative measure of legislation. We have admitted one which, I trust, we shall strike from the bill and thereby amend it."

Mr. Anderson, of Kansas, argued that competition was set aside by combination:

"We are often told that the great safeguard of the grower of products shipped by rail is the competition between carriers. It is alleged that competition is the safeguard of all trade; that almost from time immemorial this fact has been one of the laws of trade and recognized as a fundamental principle of political economy. And that statement was formerly correct. But any gentleman who will look at the effect which the building of railroads, which the employment of steam as a motor on water in the transportation of freight, which electricity, which the printing-press have had upon capital, upon labor, upon the great trade movements of the world, will find that these are factors which have very largely eliminated competition as a real force in commerce. And the question is to-day whether the farmer who raises wheat or who raises cotton, or any one else who is compelled to pay freights for rail transportation, actually possesses the safeguard of competition; whether the competition between the Pennsylvania Central and the Baltimore and Ohio and the New York and Erie and the New York Central, as rival carriers, secures to him the lowest rate at which the service can profitably be done.

"What are the facts in regard to that? The canny Scotchman who invented, or at least used, the first locomotive and built the first railroad, enunciated a sound though in his day a ridiculed proposition when he stated that 'where combination is possible competition is impossible.' To-day that proposition has supplanted competition as a safeguard. If you will stop a moment to think of the extent to which combination has been carried and of the vast area over which competition has been abrogated, you will be startled. Take one half of this continent, that west of the Mississippi River. With the Northern Pacific, with the Union Pacific, with the Atchison, Topeka, and Santa Fé, with the Texas Pacific, one would think that certainly so vast an area would in competition find a safeguard against all extortion by these companies. But what are the facts? Every single one of those roads is pooled with the others for the express purpose of preventing competition; and to such a degree is the perfection of these pools carried that they do substantially prevent competition. And you find that the people who control these lines, that Jay Gould, Dillon, Huntington, the Boston parties, and a few more men whom you could count on the fingers of your two hands, are in such combinations that they actually do collect from the whole area of half a continent precisely what rates they please, and that the farmers in that area who raise and ship their products, or who buy manufactured articles, are forced to pay the rate which, under their pool and by its abrogation of competition, these men are enabled to extort.

"But we are told that the water-ways of the country are our safeguard. I used to think they were. It seemed to me that at least upon the waves of the Atlantic and the heaving billows of the Pacific Ocean, where no rail could be spiked and no locomotive run, there assuredly and eternally would be an open highway in competition with the transcontinental lines. But what are the facts? Why, sir, that the California roads are to-day in pool with the ocean-steamers, and have wiped out competition by compelling the steamship lines to form the pool or be run out of the trade. So that not only does Huntington own all California in that sense, not only do these few men control the whole half of the continent in that sense, but they control the Pacific Ocean in so far as by steamship lines it comes in competition or may come in competition with their roads. And why? Because they have the capital to do it. Where do they get it from? They get it from the men who raise the crops and ship them over their roads, and use that precise money in building steamship lines to prevent these very men from having the benefit of competition that a beneficent Creator designed when placing the oceans.

"Take the case with respect to the Atlantic slope, which largely furnishes our cotton-fields. Before the war the great avenues of cotton shipment were down the Ohio and Mississippi Rivers and abreast the Atlantic coast. How is it to-day? Have you the competition which one would naturally suppose should result from these geographical conditions? Let me read a paragraph or two upon this point. I read from a paper by Joseph Nimmo, Chief of the Bureau of Statistics of the Treasury Department:

> The railroads of the country have become with respect to all "through traffic" virtually one system of transportation, and their efficiency as highways of commerce has been enormously increased. Between the years 1852 and 1875 several great east and west trunk lines were constructed from the Atlantic seaboard to the Mississippi River, connecting subsequently to the year 1864, at Cincinnati, Louisville, Cairo, and St. Louis with great railroad systems extending into all parts of the "cotton belt." It was not, however, until after the late war that the managers of the great east and west trunk lines, and of the trunk lines extending southward from the Ohio River and from St. Louis, were led to believe that they could successfully compete with water routes for the transportation of cotton to Northern mills and to Northern seaports, even from the southern part of Tennessee and from Arkansas; but the northward "overland" all-rail movement amounted during the year ended August 31, 1883, to 1,178,560 bales, or 17 per cent. of the entire cotton-crop. Not only is cotton thus transported from Tennessee and Arkansas, but also from points far down toward the Gulf, in

Alabama, Mississippi, Louisiana, and Texas, and from the northern portion of Georgia. The eastward movement by rail in connection with that northward overland has had the effect of reducing the receipts at Gulf ports from 3,427,585 bales in 1860 to 2,945,149 bales in 1883.

"There are the facts, and the following paragraph reveals how these marvelous changes were effected:

> One of the most noticeable features of the cotton movement of the present day is the fact that the transportation of a very large proportion of the cotton grown in the Southern States is now controlled and directed by great railroad systems and pooling arrangements. All the railroads engaged in the transportation of cotton to the Atlantic seaboard in the States of Virginia, North Carolina, and Georgia, as well as the several lines of steamers plying coastwise between the ports reached by such railroads and the ports of Boston, New York, Philadelphia, and Baltimore, have, in so far as relates to competitive traffic, united in a pooling agreement. This copartnership arrangement, known as the Southern Railway and Steamship Association, was organized in the year 1875 by Mr. Albert Fink.

"Coming to the region north of the cotton belt and east of the Mississippi River, and we find that competition has here also been eliminated, by two great pools, which control the whole area and traffic; that their joint executive committee, of which this same Mr. Fink is chairman, regulates all rates, putting them up or putting them down as they see fit. I read from the July report of the Department of Agriculture, made by J. R. Dodge, statistician:

> At a meeting of the joint executive committee held in the office of the chairman, Albert Fink, 346 Broadway, New York city, June 13, it was agreed that the following articles in car-loads, which have heretofore been in the eighth class, be placed in a special class, namely: Grain, flour, feed, bran, meal, middlings, oil-cake and meal, and cotton-seed cake and meal, and that taking effect June 24, the rates thereon shall be on the basis of 20 cents per 100 pounds, Chicago to New York; and taking effect Monday, July 21, proximo, the rate be advanced to the basis of 25 cents per 100 pounds. Also that, taking effect same date, rate on seventh class and live hogs will be on the basis of 25 cents per 100 pounds, and on ninth class 30 cents per 100 pounds, Chicago to New York; and taking effect July 21, proximo, the rates on these classes will be further advanced to the basis of 30 cents on seventh class and 35 cents on ninth class.
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> The following statement shows the rates that took effect June 24, and the advanced rates to take effect July 21, Chicago to New York: June 24, 1884, special class, grain, etc., 20 cents; seventh class and live hogs, 25 cents; eighth class, 25 cents; and ninth class, 30 cents. July 21, 1884, special class, grain, etc., 25 cents; seventh class and live hogs, 30 cents; eighth class, 25 cents; and ninth class, 35 cents.
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> This advance in the basis of rates, Chicago to New York, increases the rates on the articles named which are destined for Eastern markets from all points east of the Mississippi River.

"What was the effect of that? Simply to increase the charge of transporting wheat 5 cents on the hundred pounds or 3 cents on the bushel. In other words, it took just 3 cents per bushel out of the pocket of the farmer who had raised the wheat and had it for sale. I have no doubt that similar arbitrary increases have been made of rates on cotton and all other products. There is no pretense that the rates were so low prior to June as not to give the roads a fair compensation. They were high enough before the increase to be "reasonable" as to the companies. They raised the rate just because they had the power and could make more money; that was the only reason.

"I wish to look a little at the moral side of that act. This high-joint executive committee, or, rather, these high-joint executioners, by raising the rate 5 cents a hundred pounds, simply because of the plethoric crop of wheat which was coming in, reduced its value 3 cents per bushel to the owner of the crop—took 3 cents out of the pocket of each of those men for each bushel of wheat. It was done by pooling—by an organization of gentlemen who wield power as the officers of the pool, and who individually are said to be very respectable men. They are employed to do this business, and sell their services as such agents for large salaries. But what difference is there in the effect of their action upon the farmer of my State or the cotton-raiser of your State, between taking 3 cents a bushel from the value of the wheat, or going to that farmer and taking 3 cents out of his pocket? That action reduced the value of wheat in my State $1,440,000.

"For one, I can not see a shade of difference morally between these high-joint executioners, acting as willing agents for Jay Gould, Vanderbilt, the Boston interest, and the other owners of roads, converting that one million and a half of dollars from the pockets of the farmers of Kansas into their pockets, and these same executioners going directly to the pockets of the farmers in Kansas at midnight and robbing them of $1,440,000. If any other gentleman can see the difference I can not."

Mr. O'Neil, of Pennsylvania, pleaded for delay:

"There has been a great deal of distrust exhibited on the part of these radical interstate commerce legislators and statesmen of men connected with railroads. Some have approved of putting the matter directly into the courts, or to form new courts for the consideration of disputed questions and complaints. Some approve of a commission. I, and I believe others of the committee which considered the matter, approve of the commission plan, a commission merely to examine into the matter, to gather information, and to give information to the Congress, so that in a few months from now, when the next Congress meets with that information before it, there may be enacted proper measures for relief, if relief be needed, upon facts presented on which might be framed a suitable bill. Not information derived from mere theorists who know nothing upon the subject; not information from men who have merely vague ideas that they want to have carried out by legislative enactment, but from men who understand the scope of the subject from the beginning to the end, and understand it as men can only understand a subject who have given long study to it, who have practical experience in its workings, and are interested in the business transactions involved.

"Would this house hesitate if such a man as ex-Senator Thurman should be selected by the President as railroad commissioner? Would it hesitate if such a distinguished man as Judge Cooley, known all over the country as a man who has investigated the subject? Would there be an objection to such a man as Mr. Adams, of Massachusetts, and many others that I might mention, as able to-day to take up the question and consider it as any men or set of men in the United States, men who are as clear-minded, as patriotic, and as honorable as any who ever sat upon the Supreme Bench of the United States, or occupied a judicial position in any court in any part of the country? I think, sir, for one, that what we want is information upon this subject. Of course the House can not but see that what the committee presents and the substitute suggests, at present at least, are very crude. The differences of opinion are so great among us that members must see that it would be better if we waited for a period of time, and then after this information is furnished to us adopt some plan which had been recommended upon investigation by the distinguished men selected for their knowledge of this subject.

"It would not hurt us to postpone final action upon this subject for a few months. A postponement of one year would not do harm. On the contrary, it would be a benefit. Every month of every year in the last ten years these great railroad corporations have been reducing rates, and are still considering the ways and means by which they can further make reductions in freight and passenger charges, until in fact to-day such charges are almost infinitesimal as regards freight. But that part of the subject was thoroughly explained by the distinguished gentleman from Massachusetts (Mr. Long), so that I do not now wish to go over it. Why, the reductions in the charges of freight per ton per mile have been so great in the past few years that they can not be any burden upon any one, whether they be for a short or a long haul.

"What can we look forward to in the next five years? If these reductions go on, we will have freight carried at the rate of one half cent per ton per mile. I think it will be so. Railroads are so rapidly extending, capital is being so largely invested in them, that at this moment we have railroads extending to almost every village in all of the States and Territories throughout the whole country, and branches running out from main lines in all directions where the population is sufficient to warrant the expense of railroad connection. The complaints that come here come from those who are not living upon the railroads. It is the expense of getting their goods, their articles, grain, or whatever it may be, to the railroad stations. And yet you are asked to legislate upon a subject that is so extremely sensitive as the vast amount of capital invested in railroads. The estimated amount is immense, absolutely immense. It is useless to state it here again; it is well known that it is between seven and eight billions of dollars. The mileage is immense. At the end of 1883, from Poor's 'Manual,' we find that the railroads have increased nearly double in length of miles in a few years. There were 61,000 miles in operation in 1871 and 121,000 up to Jan. 1, 1884.

"Capital is extending these means of communication to our Territories, however distant they may be. If you look at the census tables, or if you look at this table in Poor's 'Manual,' you will see the wonderful increase of capital finding investment in the railroads in the Territories. Some of those Territories are increasing rapidly in population. Some of them are knocking at our doors here for admission as States. How have they come into that prosperous position? By the increase of population, by the easy means of access to them by the railroad systems of the country. In the next ten years, if fairly dealt with, whatever may be the complexion of Congress, Democratic or Republican, we will have probably five Territories admitted as States in this Union. But that never can be unless you carefully legislate upon the subject of railroad enterprise and extension.

"The early pioneers who went to California—and the commencement of the settlement of California is in the memory of many of us in this house—toiled on foot, some of them, across the deserts and through the valleys and over the hills; some of them went in wagons. Do you not suppose that those enlightened American men as they sat in their wagons moving slowly or traveling slowly on foot—do you not suppose they could see in the future a railroad connecting the Atlantic with the Pacific? Do you not suppose they saw that; and would you to-day, if you had the power under the law and the Constitution, take up those iron bonds between the East and the West, between the Atlantic and the Pacific, even if you could get back what Congress in its liberality appropriated in land for the establishment of rapid communication from the Eastern seaboard to the Golden Gate?"

Mr. Rice, of Massachusetts, criticised the Reagan bill: "But this bill claiming to prevent discriminations is the source and creator of them to an extent never before existing in this or any other country. It discriminates in favor of every railroad carrier who confines his operations to a single State; in favor of every one who can receive at the terminus of his road freight brought thus far by water; in favor of the carrier by water everywhere; and in favor of the carrier by a foreign road competing for freight with ours. The Dominion of Canada would not find it long difficult to complete its Pacific road when it can compete with our transcontinental lines hampered by these provisions as to rates and schedules, and the stockholders in those now existing competing with ours for east and west freight would soon rejoice in long-waited-for dividends. Nor can I understand why the framer of this bill has exempted water-freights from its provisions. The committee bill has done the same. My colleague says it is because the difficulties of including water-freight were insuperable, but it seems to me the difficulties of excepting it are greater. Interstate commerce moves on the water equally as on the rail. Why hamper the one class and leave the other free? And this in a bill professedly intended to prevent discriminations!"

Mr. Barksdale, of Mississippi, said: "Perfection is not claimed for either of these bills, but either is a long step in the right direction. It must be remembered that no product of human hands or of human brain is perfect. None but Infinite Power and Wisdom can look upon his work and say, It is finished.

"It has been said that there are irreconcilable differences between the corporations and the enormous capital they represent on the one hand and the American public on the other—the latter, for self-protection, claiming their right of control by legitimate legislation within constitutional limits; the former denying and defying such control. In the House of Representatives, on the 16th of December, 1869, the late President James A. Garfield, then a member of this body, submitted a report containing this striking language:

> I am persuaded that the next great question to be confronted will be that of corporations and their relation to the interests of the people and to national life. The fear is now entertained by many of our best men that the national and State Legislatures of the Union, in creating these vast corporations, have evoked a spirit which may escape and defy their control, and which may wield a power greater than legislatures themselves. The rapidity with which railroad corporations have consolidated during the past year is not the least manifestation of this power.

"In the light of present surroundings, these words, uttered fifteen years ago, read like prophecy. If there is an 'irrepressible conflict' between these tremendous forces — I trust there is not—whatever else shall fail, let the Constitution be enforced, let the rights of the people be maintained."

Mr. Boyle, of Pennsylvania, discussed the proposed legislation with reference to its application to particular railroads: "Assuming that these bills go beyond the common law in the matter of the wrongs prohibited, as must be maintained by those who advocate them, and as they certainly do in some other particulars, what will be their effect? Their avowed purpose is to establish equality between shippers. I presume it is not intended to establish inequalities between railroad companies, and to impose burdens upon some from which others, under similar circumstances, will be relieved. Let us see what will be their effect in this respect.

"The committee's bill provides 'that all charges by any person or persons engaged alone or associated with others in the transportation of property by railroad from one State or Territory to or through one or more other States or Territories of the United States, or to or from any foreign country, shall be reasonable.' These words, as descriptive of the persons within the purview of the bill, are referred to in every other part of it, and are substantially the same as those used in the substitute.

"Take four of the great trunk lines, which are largely engaged in carrying what is called interstate commerce. First, the New York Central road. Its terminal points are Buffalo on the lake and the city of New York. It is entirely within the State of New York. Of course to any business originating at or between these terminal points, and not going beyond them, the provisions of these bills will be inapplicable. But, more than this, they will not in any degree affect any of the immense traffic from Chicago or any of the lake ports to Buffalo, and from there to New York by the Central road, for the reason that this bill does not deal with interstate commerce carried by water, and, so far as this railroad carriage is concerned, it begins and ends within the State of New York, and does not go out of it. As to this enormous lake traffic, as to all the traffic originating at Buffalo and other points along the line and going east; as to all traffic originating at New York and along the line and going west to Buffalo, and thence by the lakes to Toledo, Detroit, Chicago, Milwaukee, or to any other point in the great West, the New York Central Company will be independent of this legislation. It may charge rates reasonable or unreasonable. It may grant rebates, drawbacks, or resort to any other device to give to one shipper preference over another. It may discriminate between shippers and between localities in any manner and to any extent it may deem proper so far as this legislation is concerned, and snap its fingers in the faces of your commissions and your courts.

"Now consider the Erie Railway. Its terminal points are Dunkirk and Buffalo on the lake and New York at tide-water. It is engaged in precisely the same kind of trade as the Central, and is practically a parallel road. But, unfortunately, it crosses a small corner of Pennsylvania. In the language of the bill, it passes from one State through one other State, and by reason of that fact is made subject to all the provisions, pains, and penalties of this measure. What the New York Central may do legally, the Erie may not do without a breach of the law. What a Central director or a Central agent may do with impunity, would make an Erie director or agent a criminal, and subject him to a fine of unlimited amount—by the substitute not less than one thousand dollars—and his company to triple damages and to costs and expenses, at the discretion of the complaining party.

"There are two other roads in like circumstances, and which afford a like striking instance of the gross injustice which will follow this legislation—the Pennsylvania Railroad and the Baltimore and Ohio. The main line of the Pennsylvania runs from the Delaware at Philadelphia to the Ohio at Pittsburg. The company owns or controls the Philadelphia and Erie from the port of Erie to its main line at Harrisburg. It controls the Allegheny Valley from the oil regions of Pennsylvania to its main line at Pittsburg. All these are wholly within the State of Pennsylvania. It passes through the gas-coal region and the coke region of western Pennsylvania. It connects with the Ohio River at Pittsburg, and is there fed by the immense traffic which is gathered from all the great rivers of the West and brought to Pittsburg. It connects those great freight-producing cities Philadelphia and Pittsburg.

"Now take the Baltimore and Ohio. Its main line runs from the bay at Baltimore to the Ohio River at Wheeling. It has a branch from Grafton to Parkersburg, also on the river. It practically owns and actually controls another line or branch from Cumberland to Pittsburg. It also traverses the gas-coal region and the coke region of western Pennsylvania, and connects the great freight-producing centers of Pittsburg and Baltimore. It gathers traffic from the commerce of the Ohio River at Wheeling and Parkersburg. It also has connections with the oil regions of Pennsylvania by means of the Pittsburg and Western. I need hardly say to gentlemen what quantities of freight originate at the points named, and are carried by these companies. From the Connellsville coke region alone, when the ovens are in operation, there are sent nine hundred car-loads of coke a day; most of it, it is true, going West, but much of it going East over these roads. I can not state what goes from other points or from other sources, but I know it to be enormous.

"As to all this traffic the Pennsylvania road will not be subject to any of the provisions of this bill, while the Baltimore and Ohio will be as to all and every part of it. The Pennsylvania may deal with shippers as it may please; it may discriminate as it may think proper, and grant such favors and impose such burdens as to it may seem good; it may build up one man and break down another, with no act of Congress to molest or make it afraid; while the Baltimore and Ohio, as to all this traffic, will be tied hand and foot. It must treat all this freight as interstate commerce. It must make it stand upon the same footing precisely as the freight which it carries from Chicago, from St. Louis, from Cincinnati, from any part of the boundless West—giving to one no advantage over the other, and imposing no burdens upon one which it does not impose upon the other. It can not discriminate between these freights, while the Pennsylvania can. It can not distinguish between freights coming to it by rail from other States and those before referred to, while the Pennsylvania can. Its officers become criminals for doing what Pennsylvania officials may do without impairing their reputation as honest men."

In discussing the propriety of making freight charges without regard to length of haul, Mr. Budd, of California, made an enumeration of conditions affecting cost of transportation: "The following are a few of the many elements that enter into the cost of transportation; many of these are much more important than distance: 1. Gradients. I append a table showing the hauling power of a thirty-three-ton locomotive:

GRADES.	Hauling power.	Loaded cars.
	Tons.	
On a level..	1,400	70
Twenty feet to the mile	655	32
Forty feet to the mile	415	21
Sixty feet to the mile	300	15
Eighty feet to the mile	230	11
One hundred feet to the mile	180	9

"2. Cost of road itself. All will understand that, to make the same rate of profit on two roads of equal length and volume of traffic, more must be charged upon the costlier one.

"3. Wages paid. These differ greatly. On the Pacific coast they are over one third greater than the average on the railroads of the United States.

"4. Cost of fuel and materials, which vary greatly.

"5. The direction of the haul. This is a greater item than is generally supposed. It has been estimated that, because the west-bound cars are generally empty, freight can often be carried in them at a profit over operating expenses for from one third to one fifth of the east-bound charges. This was calculated a few years since over the Pittsburg and Fort Wayne. It was also found by Morehouse, of the Illinois Central, that the average cost of freight transportation over that line per ton per mile was 15·8 mills, but that return freight could be carried for three mills per ton per mile, or at about one sixth of this, and that if the cars traveled both ways loaded the freight charges could be reduced one half and still yield the same profits. Under section 4, however, one could not charge less for a shorter haul of return than for a longer haul of through freight.

"6. Speed. The importance of this I have shown.

"7. Competition. The controlling influence of water and rail competition all understand. It is not only competition between lines of transportation that determined their rates, but also the competition of places. The competition of foreign markets must be considered, and the price and volume of wheat in India and at Odessa have a large influence in determining the rates to the United States seaboard.

"8. Volume of traffic. This is one of the most important elements considered by railroad officials in the preparation of schedules of charges. Its importance can not be overlooked. Morehouse's figures show that on the Illinois Central, if the volume was only sufficient to fill the cars operated, a reduction of one half in the charges would give the same profits. This being so, the effect of doubling the volume of traffic can be understood."

Dec. 16, 1884, the House decided by the following vote to take up Mr. Reagan's substitute instead of the first seven sections of the bill reported from the Committee on Commerce:

YEAS—Alexander, Anderson, Bagley, Ballentine, Barksdale, Beach, Bennett, Blanchard, Blount, Bratton, Breckinridge, Buchanan, Buckner, Burnes, Cabell, Caldwell, J. E. Campbell, J. M. Campbell, Candler, Carleton, Clay, Clements, Cobb, Collins, Cook, Cosgrove, W. R. Cox, Crisp, D. B. Culberson, Cullen, Davidson, L. H. Davis, Dibrell, Dockery, Dowd, Dunn, Eldredge, English, Ferrell, Foran, Forney, Fyan, Geddes, Gibson, Glascock, Goff, Green, Halsell, Hancock, Hardeman, W. H. Hatch, Hemphill, Henley, Herbert, G. W. Hewitt, Holman, Hopkins, Hunt, James, B. W. Jones, J. H. Jones, J. K. Jones, J. T. Jones, Jordan, Kleiner, Lamb, Lanham, Le Fevre, Lewis, Lore, Lovering, Lowry, McComas, McMillin, Millard, J. F. Miller, Mills, Morrison, Moulton, Muldrow, Murphy, Murray, Neece, Nelson, Nicholls, Nutting, Oates, O'Ferrall, Patton, Payson, Peel, Pettibone, Pierce, Pryor, Randall, G. W. Ray, Reagan, Reese, Riggs, Robertson, J. H. Rogers, W. F. Rogers, Rosecrans, Scales, Shively, Singleton, C. R. Skinner, T. G. Skinner, Smalls, Snyder, Springer, Charles Steward, Stockslager, Storm, C. A. Sumner, J. M. Taylor, Thompson, Throckmorton, Townshend, Tucker, Tully, H. G. Turner, Oscar Turner, Van Alstyne, Van Eaton, Wallace, Ward, Richard Warner, Weaver, Wellborn, J. D. White, Wilkins, Williams, Willis, W. L. Wilson, E. B. Winans, John Winans, Wolford, Wood, Worthington, Yaple, York —142.

NAYS—G. E. Adams, Atkinson, Barr, Boutelle, Bowen, Breitung, F. B. Brewer, J. H. Brewer, W. W. Brown, T. M. Browne, Cannon, Chase, Clardy, Converse, W. W. Culbertson, Cutcheon, Dargan, G. R. Davis, R. T. Davis, Deuster, Dibble, Eaton, Elliott, Evans, Everhart, Finerty, Funston, Greenleaf, Hanback, Harmer, H. H. Hatch, Haynes, D. B. Henderson, T. J. Henderson, Hepburn, A. S. Hewitt, Hiscock, Hitt, Hoblitzell, Holmes, Holton, Horr, Houseman, Hurd, Johnson, Kean, Keifer, Lacey, Laird, Lawrence, Libbey, Long, Lyman, McCoid, Milliken, Mitchell, Morrill, Morse, Mutchler, O'Hara, Charles O'Neill, J. J. O'Neill, Parker, Payne, Perkins, Peters, Phelps, Potter, Rankin, Ranney, Reed, Rice, J. S. Robinson, Rockwell, Rowell, Ryan, Seymour, A. H. Smith, H. Y. Smith, Stephenson, Stevens, J. W. Stewart, Strait, Struble, Talbott, E. B. Taylor, Thomas, Tillman, Wadsworth, Wait, Wakefield, A. J. Warner, Washburn, Wemple, Milo White, Whiting, James Wilson, Woodward—98.

NOT VOTING—J. J. Adams, Aiken, Arnot, Barbour, Bayne, Belford, Belmont, Bingham, Bisbee, Blackburn, Bland, Boyle, Brainerd, Broadhead, Brumm, Budd, Burleigh, Felix Campbell, Cassidy, Chalmers, Connolly, Covington, S. S. Cox, Curtin, Dingley, Dorsheimer, Dunham, Ellis, Ellwood, Ermentrout, Fiedler, Findlay, Follett, Garrison, George, Graves, Guenther, Hammond, Hardy, Hart, Hill, Hooper, Houk, Howey, Hutchins, Jeffords, Kelley, Kellogg, Ketcham, King, McAdoo, McCormick, Matson, Maybury, S. H. Miller, Money, Morgan, Muller, Ochiltree, Paige, Poland, Post, Price, Pusey, Ossian Ray, W. E. Robinson, Russell, Seney, Shaw, Shelley, Slocum, Spooner, Spriggs, Steele, Stone, D. H. Sumner, J. D. Taylor, Valentine, Vance, Weller, G. D. Wise, J. S. Wise, Young—83.

The remaining sections of the committee's bill were then stricken out by a vote of 108 yeas to 68 nays, and the Reagan bill was taken up and considered section by section under the five-minute rule. The liveliest discussion arose on the following amendment, proposed by Mr. O'Hara, of North Carolina:

Insert after the word "reasonable," in section 1, line 13, the following:

"And any person or persons having purchased a ticket to be conveyed from one State to another, or paid the required fare, shall receive the same treatment and be afforded equal facilities and accommodations as are furnished all other persons holding tickets of the same class without discrimination."

Mr Reagan argued that the amendment was out of place, as the bill was simply designed to regulate freight traffic; but it was adopted by the following vote:

YEAS—G. E. Adams, Anderson, Atkinson, Bagley, Barr, Beach, Blount, Boutelle, Breitung, F. B. Brewer, J. H. Brewer, W. W. Brown, T. M. Browne, Buckner, Budd, J. E. Campbell, J. M. Campbell, Cannon, Carleton, Chace, Converse, W. W. Culbertson, Cullen, Cutcheon, Dargan, G. R. Davis, R. T. Davis, Eldredge, Elliott, Evans, Everhart, Ferrell, Follett, Funston, George, Goff, Greenleaf, Hanback, Harmer, H. H. Hatch, Haynes, D. B. Henderson, T. J. Henderson, Hepburn, A. S. Hewitt, Hiscock, Hitt, Hoblitzell, Holman, Holmes, Hopkins, Houseman, Howey, James, Johnson, B. W. Jones, Jordan, Kean, Keifer, Lacey, Laird, Lamb, Lawrence, Le Fevre, Libbey, Long, Lovering, Lowry, Lyman, McCoid, McComas, Millard, Milliken, Mitchell, Morrill, Morse, Murphy, Murray, Nelson, Nutting, O'Hara, Charles O'Neill, Parker, Payne, Payson, Perkins, Peters, Pettibone, Potter, Pusey, Ranney, G. W. Ray, Reed, Rice, J. S. Robinson, Rockwell, Rosecrans, Rowell, Ryan, Seymour, C. R. Skinner, A. H. Smith, H. Y. Smith, Spriggs, Springer, Stephenson, Stevens, J. W. Stewart, Stone, Strait, Struble, C. A. Sumner, J. D. Taylor, Thomas, Van Alstyne, Wadsworth, Wait, Wakefield, Ward, A. J. Warner, Washburn, Weaver, Wemple, J. D. White, Milo White, Whiting, Wilkins, James Wilson, W. L. Wilson, E. B. Winans, John Winans, Woodward, Worthington, Yaple—134.

NAYS—Alexander, Ballentine, Barksdale, Bennett, Blackburn, Blanchard, Boyle, Bratton, Breckinridge, Buchanan, Cabell, Caldwell, Candler, Clardy, Clay, Clements, Cobb, Cook, Cosgrove, W. R. Cox, Crisp, D. B. Culberson, Davidson, L. H. Davis, Dibble, Dibrell, Dockery, Dowd, Dunn, Ellis, Forney, Fyan, Gibson, Glascock, Green, Halsell, Hancock, Hardeman, W. H. Hatch, Hemphill, Henley, Herbert, G. W. Hewitt, Hunt, J. H. Jones, J. K. Jones, J. T. Jones, Kleiner, Lanham, Lewis, Lore, McMillin, J. F. Miller, Mills, Morrison, Muldrow, Mutchler, Neece, Oates, O'Ferrall, J. J. O'Neill, Patton, Pierce, Peel, Pryor, Randall, Rankin, Reagan, Reese, Riggs, Robertson, J. H. Rogers, W. F. Rogers, Scales, Shiveley, Singleton, T. G. Skinner, Snyder, Charles Stewart, Stockslager, Storm, J. M. Taylor, Thompson, Throckmorton, Tillman, Tucker, Tully, H. G. Turner, Oscar Turner, Van Eaton, Wallace, Richard Warner, Wellborn, Williams, Willis, Wolford, Wood—97.

NOT VOTING—J. J. Adams, Aiken, Arnot, Barbour, Bayne, Belford, Belmont, Bingham, Bisbee, Bland, Bowen, Brainerd, Broadhead, Brumm, Burleigh, Burnes, Felix Campbell, Cassidy, Chalmers, Collins, Connolly, Covington, S. S. Cox, Curtin, Deuster, Dingley, Dorsheimer, Dunham, Eaton, Ellwood, English, Ermentrout, Fiedler, Findlay, Finerty, Forney, Garrison, Geddes, Graves, Guenther, Hammond, Hardy, Hart, Hill, Holton, Hooper, Horr, Houk, Hurd, Hutchins, Jeffords, Kelley, Kellogg, Ketcham, King, McAdoo, McCormick, Maston, Maybury, S. H. Miller, Money, Morgan, Moulton, Muller, Nicholls, Ochiltree, Paige, Phelps, Poland, Post, Price, Ossian Ray, W. E. Robinson, Russell, Seney, Shaw, Shelley, Slocum, Smalls, Spooner, Steele, D. H. Sumner, Talbott, E. B. Taylor, Townshend, Valentine, Vance, Weller, G. D. Wise, J. S. Wise, York, Young—92.

Dec. 17, 1884, Mr. Crisp, of Georgia, moved the following amendment to the O'Hara amendment:

After the word "discrimination" insert:

"Nothing in this act contained shall be so construed as to prevent any railroad company from providing separate accommodations for white and colored persons."

For this amendment, Mr. Breckinridge, of Arkansas, proposed the following substitute:

But nothing in this act shall be construed to deny to railroads the right to classify passengers as they may deem best for the public comfort and safety, or to relate to transportation between points wholly within the limits of one State.

The debate on these points took a political turn—the Republicans arguing against the scheme for classification as a violation of civil rights, and the Democrats showing a disposition to avoid the issue, while the advocates of the bill asserted that the question was brought up merely to defeat the measure by those who did not dare to oppose it on its merits. Mr. Breckinridge's substitute displaced Mr. Crisp's amendment by a vote of 137 yeas to 127 nays, and the amendment as amended was then adopted, as follows:

Yeas—Aiken, Alexander, Ballentine, Barksdale, Bennett, Blackburn, Blanchard, Blount, Bratton, Breckinridge, Broadhead, Buchanan, Buckner, Budd, Burnes, Cabell, Caldwell, J. E. Campbell, Candler, Carleton, Cassidy, Clardy, Clay, Clements, Cobb, Converse, Cook, Cosgrove, Covington, S. S. Cox, W. R. Cox, Crisp, D. B. Culberson, Dargan, Davidson, L. H. Davis, Dibble, Dibrell, Dockery, Dunn, Eaton, Ellis, Ermentrout, Ferrell, Findlay, Follett, Foran, Forney, Fyan, Geddes, Gibson, Glascock, Graves, Green, Greenleaf, Halsell, Hammond, Hardeman, W. H. Hatch, Hemphill, Henley, Herbert, G. W. Hewitt, Holman, Hunt, Hurd, J. H. Jones, J. K. Jones, J. T. Jones, Kleiner, Lanham, Le Fevre, Lewis, Lore, McAdoo, McMillin, Matson, J. F. Miller, Mills, Mitchell, Money, Morrison, Moulton, Muldrow, Murphy, Murray, Mutchler, Neece, Nicholls, Oates, O'Ferrall, Patton, Pierce, Peel, Pryor, Randall, Rankin, Reagan, Reese, Riggs, J. H. Rogers, Rosecrans, Scales, Seymour, Singleton, T. G. Skinner, Snyder, Springer, Charles Stewart, Stockslager, Storm, C. A. Sumner, Talbott, J. M. Taylor, Thompson, Throckmorton, Tillman, Townshend, Tucker, Tully, H. G. Turner, Oscar Turner, Van Eaton, Wallace, A. J. Warner, Richard Warner, Wellborn, Wilkins, Williams, Willis, W. L. Wilson, E. B. Winans, John Winans, G. D. Wise, Wolford, Wood, Young—137.

Nays—G. E. Adams, Anderson, Atkinson, Bagley, Barr, Beach, Belmont, Bingham, Bisbee, Boutelle, Brainerd, Breitung, F. B. Brewer, J. H. Brewer, W. W. Brown, T. M. Browne, Brumm, Burleigh, J. M. Campbell, Cannon, Chalmers, W. W. Culbertson, Cullen, Cutcheon, G. R. Davis, R. T. Davis, Deuster, Dingley, Eldredge, Evans, Everhart, Funston, Goff, Guenther, Hanback, Harmer, H. H. Hatch, Haynes, D. B. Henderson, T. J. Henderson, Hepburn, A. S. Hewitt, Hill, Hiscock, Hitt, Hoblitzell, Holmes, Holton, Horr, Houk, Howey, James, Jeffords, Johnson, B. W. Jones, Kean, Keifer, Ketcham, Lacey, Laird, Lamb, Lawrence, Libbey, Long, Lovering, Lowry, Lyman, McCoid, McComas, McCormick, Millard, Milliken, Morrill, Morse, Nelson, Nutting, O'Hara, Charles O'Neill, J. J. O'Neill, Parker, Payne, Payson, Peters, Pettibone, Phelps, Poland, Post, Potter, Price, Ranney, G. W. Ray, Ossian Ray, Reed, Rice, J. S. Robinson, Rockwell, Rowell, Russell, Ryan, Seney, Shively, C. R. Skinner, Smalls, A. H. Smith, H. Y. Smith, Spooner, Spriggs, Stephenson, Stevens, J. W. Stewart, Stone, Strait, Struble, E. B. Taylor, J. D. Taylor, Thomas, Van Alstyne, Wadsworth, Wait, Wakefield, Ward, Washburn, Weaver, Wemple, J. D. White, Milo White, Whiting, James Wilson, Woodward, Worthington, Yaple—131.

Not Voting—J. J. Adams, Arnot, Barbour, Bayne, Belford, Bland, Bowen, Boyle, Felix Campbell, Chace, Collins, Connolly, Curtin, Dorsheimer, Dowd, Dunham, Elliott, Ellwood, English, Fiedler, Finerty, Garrison, George, Hancock, Hardy, Hart, Hooper, Hopkins, Houseman, Hutchins, Jordan, Kelley, Kellogg, King, Maybury, S. H. Miller, Morgan, Muller, Ochiltree, Paige, Perkins, Pusey, Robertson, W. E. Robinson, W. F. Rogers, Shaw, Shelley, Slocum, Steele, D. H. Sumner, Valentine, Vance, Weller, J. S. Wise, York—55.

Mr. Mills, of Texas, offered the following amendment:

Nor shall any railroad company or its officers charge or receive from any person who is to be conveyed from one State or Territory into another any sum exceeding three cents per mile for the distance to be traveled by said person.

It was adopted by a vote of 139 yeas to 120 nays. Mr. Goff, of Arkansas, then submitted the following amendment to the substitute:

Provided, That no discrimination is made on account of race or color.

This amendment was adopted by a vote of 141 yeas to 102 nays. Dec. 18, 1884, a motion to lay the motion to reconsider this vote having failed, Mr. Barksdale, of Mississippi, submitted the following amendment:

Amend by adding after the word "color" in the amendment last adopted the following:

"And that furnishing separate accommodations, with equal facilities and equal comforts, at the same charges, shall not be considered a discrimination."

This amendment was adopted by a vote of 132 yeas to 124 nays.

Mr. Horr, of Michigan, brought up the old question again by offering an amendment providing that such separation must not be made on the basis of race or color, but it was rejected by a vote of 114 yeas to 121 nays, 89 not voting. An amendment requiring any railroad that at any time issues a free pass to any person not an employé shall issue a free pass to whosoever applies for it within ten days, was voted down.

Dec. 19, 1884, Mr. Hewitt, of New York, moved as an amendment to strike out the following provision from the third section of the bill:

And it shall be unlawful for any person or persons carrying property as aforesaid to enter into any contract, agreement, or combination for the pooling of freights, or to pool the freights, of different and competing railroads, by dividing between them the aggregate or net proceeds of the earnings of such railroads, or any portion of them.

In support of his amendment Mr. Hewitt said: "Mr. Speaker, undoubtedly this provision is based upon the idea that pooling is an evil which ought to be abated; that it is against the public interest, and therefore should be prohibited. Pooling may be an evil, Mr. Speaker. There are a great many evils in this world which are remedies for other evils still greater. This class of remedial evils constitutes a large portion of the existing legislation of every civilized country. Now, the evil that pooling was intended to remedy became intolerable. It was the evil of competition, of unlimited competition, leading to discrimination, to private bargains, to fluctuations in the transportation of goods. Not a single consignment could be carried from one point in this country to any other point without a private bargain being necessary on the part of the shipper and the railroad company. Great houses were compelled to employ clerks whose sole business it was to go from railroad-office to railroad-office and make bargains. More than that, the companies themselves who were intended to be the common carriers for the commerce of the country found themselves reduced to the position of hucksters, and compelled to have a corps of officers and an army of clerks to regulate freight on every invoice of goods which might be shipped over their roads. This evil was so enormous both to the public and the railroad companies that it led to the only practical remedy, which was pooling.

"Pooling, if honestly conducted, gives stability in the rate of freights and equal terms to every customer, and is in fact carrying out the great right in common carriage of equal rights to all men. But pooling has not always been honestly managed; hence railroad companies in their own interest were compelled to attempt to regulate pooling, and they have regulated it by the appointment of commissions and commissioners. The evil of competitive and uncertain rates has therefore to a large extent been overcome by a pooling arrangement. How shall the evils of a pooling arrangement be overcome?

"The gentleman from Texas tells us by the abolition of pooling, and then he sends us back into the very situation from which the privilege of pooling extricated us.

"Mr. Speaker, legislation should not be retroactive. It should proceed upon a careful study of the conditions under which we are trying to do business, and the indications of the situation should be carefully studied. Let me tell these gentlemen, and I suppose I utter a familiar truth to the legal luminaries in this house, that first we get experience, out of experience comes custom, and out of custom comes the common law. So when we are trying to legislate let us see how things are tending toward the establishment of custom; and instead of trying to crush and break it down, let us by legislation enact the coming custom, if we know it earlier, into law. You will thus anticipate what is to be the common law by the common consent of the citizens of this country. Therefore when the railroad companies and the public consented, in view of the common interest of all, to the establishment of this system of pooling, they did it by a commission, and it should be an indication to us that we should also regulate pooling by the establishment of a commission. A bill brought in here to establish a commission would be one approved by the general judgment and experience of men familiar with business. A bill to prevent pooling will be against the experience and general judgment of men familiar with business."

The amendment was rejected; and Mr. Hewitt proposed to amend the third section by adding this clause:

Unless the rates established by such pooling contracts shall be reasonable and just.

Mr. Phelps, of New Jersey, in discussing this amendment, argued in a general way against the bill itself, and said in conclusion: "Managers were never more solicitous for business and never more ready to make sacrifices to get it. They know that rivals are so many they must themselves create and develop it, and in a one-sided partnership, where the customer gets all the benefit, they aid him in its creation or development. I challenge contradiction when I say that there never was a time when a company that wished to open a mine or a factory could get better returns than now. It is almost accurate to say that the miner or the manufacturer can fix his own rates for the years of experiment. Nor has the power of public opinion weakened. It controls the management of railways as a management and as individual men. The management knows that the surest path to business is that of public favor; that the popular road makes money, and to secure this popularity they spend money lavishly, they make concessions generously. Nor is generally enough stress laid on the character of the management and their natural desire as men to have the approbation of their neighbors and to secure that good report, that good reputation which is the highest prize of life.

"Do not confound the managers of whom I speak, and whom I honor, with the great speculators in securities, whom I despise. It is the speculators and the stock exchange that receive the public attention; it is the railway and its managers who deserve it. It is a great injustice to confound them. The managers are men of high character and great abilities. Theirs is a profession, and they are proud of it. They are sure to spend their lives in its practice, and most of them practice it in the same railway corporation. They are faithful, public-spirited, and as a rule honored and beloved by those among whom they live and with whom they deal. In their desire to retain and deserve this good opinion of their vicinage they are more apt to sacrifice their road than the public. But the great speculators, unlike you or me or them, remote from intercourse with the customers of the road, are indifferent to public opinion, and should be curbed. But, remember, these men, while their names are allied to the roads, almost never interfere with their practical management. Their sole interest is in the stock. That they seize; they hold it for a day, until they have worked their own wicked will on it, and then they cast it out dishonored, to be the prey of the next adventurer. If they retain it longer, it is only to elect a board of directors which shall suffer them to manipulate the securities, and, that accomplished, their interest ends.

"The managers of the road meantime go on with their regular business, and have no more connection with the speculators whose names are in stock circles allied with their roads than you or I, Mr. Speaker, except the bitter disgust with which they see these bad men so confusing the distinction between themselves and the actual managers that in the public mind they are apt to stand in the same light and receive the same censure.

"Let, then, the laws of man and of nature continue their work of progress and reform. Why attempt to restrict, why pass restrictions which will interfere with these general laws, which are working out the results you pretend to wish? Your effort is vain; your restrictions will be disregarded. Do you ask me how?

"The railways, if these restrictions should become laws, will ostentatiously break them all. They will invite litigation until the wheels of the courts are clogged. That will challenge public attention, and public attention is redress. Or they will issue an order, which the whole railway system shall obey, that every locomotive from sea to sea shall stay in its roundhouse; then there will follow a silence from Portland in Oregon to Portland in Maine that can be felt, and only one voice will be heard, the familiar voice of our Speaker: 'The gentleman from Texas asks unanimous consent to consider a bill to repeal an act entitled "An act to regulate interstate commerce." Is there objection?' Mr. Speaker, just so sure as the report follows the flash, we shall hear, as the end of the matter, 'The Chair hears none.'"

Mr. Hewitt's second amendment was disagreed to. Dec. 20, 1884, the following amendment to section 4, proposed by Mr. Henderson, of Iowa, was discussed:

Strike out of section 4 the following words:

"That it shall be unlawful for any person or persons engaged in the transportation of property as provided in the first section of this act to charge or receive any greater compensation for a similar amount and kind of property, for carrying, receiving, storing, forwarding, or handling the same, for a shorter than for a longer distance on any one railroad; and . . ."

So that the section will read:

"SEC. 4. The road of a corporation shall include all the road in use by such corporation, whether owned or operated by it under a contract, agreement, or lease by such corporation."

The amendment was disagreed to, by a vote of 57 yeas to 117 nays.

Jan. 7, 1885, a motion, by Mr. O'Neill, of Pennsylvania, to strike out the whole section was rejected by a vote of 90 yeas to 128 nays, and an amendment exempting from the restriction contained in the section all railways in competition with water-ways was also disagreed to, while an amendment offered by Mr. Hopkins, of Pennsylvania, inserting the words "or pipe-line" after the word "railroad" wherever it occurred in the bill, was accepted. On motion of Mr. Struble, of Iowa, the following amendment to the fifth section was adopted:

Add to section 5 the following:

"Fourth. It shall be the duty of said person or persons engaged in carrying property, as provided in the first section of this act, to file or cause to be filed, and within fifteen days from and after posting, a copy of each schedule, posted as in this section required, with the Clerk of the Circuit Court of the United States in and for each judicial circuit in or through which any railroad may be operated; and it shall be the duty of said clerk to file and preserve the same as a part of the records of his office."

On motion of Mr. Hopkins, of Pennsylvania, the seventh section was amended by adding the following:

"And any Circuit or District Court of the United States having jurisdiction of the persons shall have the power, upon application of any person or persons, firms, railroads, or other corporations or associations, alleging undue and unjust discrimination against a person in violation of the provisions of this act, to issue writs of mandamus against such person, commanding such person to move and transport freight, or to furnish facilities for transportation for the party applying for the writ, upon such terms and in such manner as shall seem just and proper to the court in order to prevent any undue or unjust discrimination against the relator. The proceedings shall be as in other cases of mandamus; and in cases of urgent necessity or involving the transportation of perishable goods the writs of alternative mandamus may be made returnable forthwith: *Provided*, That no writ or peremptory mandamus shall issue under this act until the relator shall have given security, in such sum as shall be named by the court, to pay the defendant the proper and legal charges for the services required to be performed by the writ aforesaid: *And provided further*, That the remedy herein given by writ of mandamus shall be cumulative, and shall not exclude or interfere with the other remedies herein provided."

Mr. Hammond, of Georgia, offered the following amendment:

"No cause brought under this act in any State court of competent jurisdiction shall be removed to any United States court."

Mr. Smalls, of South Carolina, described this amendment as offered in the interest of the "Jim Crow car." and called for the yeas and nays on its adoption. It was agreed to by a vote of 125 yeas to 88 nays.

The eighth section was amended by making the penalty clause read, "shall be fined not more than $2,000," instead of "shall be fined not less than $1,000." With the exception of some minor changes which occasioned no debate, the text of the bill received no further amendment. Jan. 8, a motion by Mr. Perkins, of Kansas, to restore the sections providing for a commission; a motion by Mr. Hepburn, of Iowa, to recommit the bill to the Committee on Commerce with instructions to report, with amendments providing for a commission; and a motion by Mr. O'Neill, of Pennsylvania, to substitute for the Reagan bill a scheme for the appointment of commissioners with power to examine and report upon the necessity of remedial railroad legislation, were all rejected, and the Reagan bill passed the House by the following vote:

YEAS—Alexander, Anderson, Bagley, Ballantine, Barksdale, Bayne, Beach, Blackburn, Blanchard, Bland, Blount, Brainerd, Breckenridge, W. W. Brown, T. M. Browne, Buchanan, Budd, Burnes, Cabell, Caldwell, Felix Campbell, J. M. Campbell, Cassidy, Clardy, Clements, Cobb, Connolly, Cook, Cosgrove, Covington, S. S. Cox, W. R. Cox, Crisp, Cullen, Curtin, Davidson, L. H. Davis, Dibrell, Eldredge, English, Ermentrout, Ferrell, Fiedler, Findlay, Foran, Forney, Funston, Fyan, Garrison, Geddes, George, Glascock, Goff, Green, Halsell, Hanback, Hardy, W. H. Hatch, Haynes, D. B. Henderson, Henley, Herbert, Holman, Holmes, Hopkins, Houseman, Hunt, James, B. W. Jones, J. H. Jones, J. T. Jones, King, Kleiner, Lamb, Lanham, Le Fevre, Lewis, Lore, Lovering, McComas, McCormick, McMillin, Matson, Maybury, J. F. Miller, Money, Morgan, Morrill, Moulton, Muller, Murphy, Neece, Nelson, Nutting, Oates, O'Ferrall, Patton, Payson, Peel, Perkins, Peters, Pettibone, Pierce, Price, Pryor, Pusey, Randall, Reagan, Riggs, Robertson, J. S. Robinson, J. H. Rogers, W. F. Rogers, Rosecrans, Rowell, Ryan, Shively, Singleton, T. G. Skinner, Smalls, Snyder, Spriggs, Charles Stewart, Stockslager, Stone, Storm, Strait, Struble, C. A. Sumner, Swope, Talbott, J. D. Taylor, J. M. Taylor, Throckmorton, Townshend, Tucker, Tully, H. G. Turner, Oscar Turner, Van Eaton, Wakefield, Wallace, A. J. Warner, Richard Warner, Weaver, Wellborn, Wemple, Milo White, Wilkins, Williams, Willis, James Wilson, W. L. Wilson, E. B. Winans, John Winans, G. D. Wise, Wolford, Worthington, Yaple, York—161.

NAYS—G. E. Adams, J. J. Adams, Aiken, Atkinson, Barr, Bingham, Bisbee, Boutelle, Bowen, Boyle, Bratton, Breitung, F. B. Brewer, J. H. Brewer, Brumm, Candler, Cannon, Chace, Cutcheon, G. R. Davis, R. T. Davis, Deuster, Dowd, Dunham, Eaton, Elliott, Everhart, Greenleaf, Hammond, Hardeman, Harmer, Hemphill, T. J. Henderson, Hepburn, A. S. Hewitt, G. W. Hewitt, Hitt, Hoblitzell, Horr, Houk, Howey, Jeffords, Johnson, Kean, Keifer, Kelley, Ketcham, Lacey, Libby, Long, Lyman, Millard, Mitchell, Morse, Mutchler, Nicholls, O'Harra, Charles O'Neill, Phelps, Post, Potter, Ranney, Reed, Rockwell, Seymour, A. H. Smith, Stevens, E. B. Taylor, Thomas, Tillman, Wait, Washburn, Whiting, J. S. Wise, Woodward—75.

NOT VOTING—Arnot, Barbour, Belford, Belmont, Bennett, Broadhead, Buckner, Burleigh, J. E. Campbell, Carleton, Chalmers, Clay, Collins, Converse, D. B. Culberson, W. W. Culbertson, Dargan, Dibble, Dingley, Dockery, Dorsheimer, Dunn, Ellis, Ellwood, Evans, Finerty, Follett, Gibson, Graves, Guenther, Hancock, Hart, H. H. Hatch, Hill, Hiscock, Holton, Hooper, Hurd, Hutchins, J. K. Jones, Jordan, Kellogg, Laird, Lawrence, Lowry, McAdoo, McCoid, S. H. Miller, Milliken, Mills, Morrison, Muldrow, Ochiltree, J. J. O'Neill, Paige, Parker, Payne, Poland, Rankin, G. W. Ray, Ossian Ray, Reese, Rice, W. E. Robinson, Russell, Seney, Shaw, Shelley, C. R. Skinner, Slocum, H. Y. Smith, Spooner, Springer, Steele, Stephenson, J. W. Stewart, D. H. Sumner, Thompson, Valentine, Van Alstyne, Vance, Wadsworth, Ward, Weller, J. D. White, Wood, Young—87.

Dec. 4, 1884, the Senate took up for consideration "a bill to establish a commission to regulate interstate commerce and for other purposes," reported from the Committee on Railroads. This measure was debated at some length and amended, and when the Reagan bill came from the House, January 17, Mr. Cullom, of Illinois, moved to strike out all after the enacting clause and insert the Senate bill. Both measures were discussed at great length, and so elaborately that mere extracts would hardly serve to represent the debate; and finally, February 3, Mr. Cullom's motion was adopted by the following vote:

YEAS—Aldrich, Allison, Blair, Chace, Colquitt, Cullom, Dawes, Dolph, Frye, Hampton, Harrison, Hawley, Hoar, Ingalls, Jackson, Jonas, Jones of Nevada, Lapham, McMillan, McPherson, Mahone, Miller of California, Miller of New York, Mitchell, Morgan, Morrill, Pike, Platt, Pugh, Riddleberger, Sabin, Sewell, Sherman, Wilson—34.

NAYS—Bayard, Butler, Cockrell, Coke, Edmunds, Fair, Groome, Harris, Joues of Florida, Kenna, Lamar, Manderson, Maxey, Pendleton, Vance, Van Wyck, Vest, Voorhees—18.

ABSENT—Beck, Bowen, Brown, Call, Camden, Cameron of Pennsylvania, Cameron of Wisconsin, Conger, Farley, Garland, George, Gibson, Gorman, Hale, Hill, Logan, Palmer, Plumb, Ransom, Saulsbury, Sawyer, Slater, Walker, Williams—24.

The substitute was then taken up and amended, and finally passed February 4, as follows:

That for the purpose of providing for the regulation of commerce among the several States and Territories a commission is hereby created and established, to be known as the Interstate-Commerce Commission, which shall be composed of nine commissioners, who shall be appointed by the President, by and with the advice and consent of the Senate, one of whom shall be selected from each judicial circuit of the United States. Three of the commissioners first appointed under this act shall continue in office for terms of two years, three for four years, and three for six years, the respective terms to be designated by the President; but their successors shall be appointed for terms of six years, except that any person chosen to fill a vacancy shall be appointed only for the unexpired term of the commissioner whom he shall succeed. Any commissioner may be removed by the President for incompetency or malfeasance in office. Vacancies occasioned by removal, resignation, or other cause shall be filled by the President. And not more than five shall belong to the same political party.

SEC. 2. That the commission hereby created shall have and exercise the powers and discharge the duties defined and granted in this act pertaining to the methods and regulating the operation of all transportation companies engaged in interstate commerce, and to take into consideration and to thoroughly investigate all the various questions relating to commerce between the States, and especially in the matter of the transportation thereof, so far as may be necessary to the establishment of a just system of regulations for the government of the same.

SEC. 3. That if any transportation company engaged in interstate commerce shall collect, demand, or receive, in the transaction of the business of interstate commerce, more than a reasonable rate of compensation for the transportation of freight of any description, or for the receiving, delivery, storage, or handling of property, or for the use or transportation of any railroad-car upon its railroad, or on any of the branches thereof, or upon any railroad it has the right, license, or permission to use, operate, or control, said transportation company shall be deemed guilty of extortion, which is hereby declared to be a misdemeanor.

SEC. 4. That if any transportation company engaged in interstate commerce shall, directly or indirectly, by any rebate, drawback, or other device, charge, demand, collect, or receive from any person a greater compensation for any service it may render in its transaction of interstate commerce than it charges, demands, collects, or receives from any other person for doing for him, in a like business and under substantially similar circumstances and conditions, contemporaneously a like service, or if any such transportation company shall neglect or refuse to furnish the same facilities for the carriage, receiving, delivery, storage, and handling of interstate-commerce freights, to one person that is at the same time furnished to any other person for the carriage, receiving, delivery, storage, and handling of such freights of the same class, and under substantially similar circumstances, such transportation company shall be deemed guilty of unjust discrimination, which is hereby declared to be a misdemeanor.

SEC. 5. That whenever complaint is made to the commission, in such manner as it may prescribe, charging any transportation company engaged in interstate commerce with extortion or unjust discrimination in the transaction of such business, a statement of the charges thus made shall be forwarded to the transportation company, which shall be called upon to satisfy the complaint or to answer the same in writing within a reasonable given time.

If such transportation company shall, within the time specified, make reparation for the injury done and the complaint shall be withdrawn, the case shall be dismissed, and the transportation company shall be relieved of liability for any other penalty for the particular violation of this act thus complained of.

If such transportation company shall not satisfy the complaint within the time specified, or if it shall neglect or refuse to answer the same as required, or if either party to the proceeding shall demand a hearing, and there shall appear to be any reasonable ground for investigating said complaint, it shall be the duty of the commission to investigate the matters complained of, to determine all questions of fact at issue, to record its finding, and to furnish a report thereof to both parties.

And if it shall appear that the transportation company has been guilty of either extortion or unjust discrimination as charged, it shall be the duty of the commission to give notice to such company to discontinue the practice thereof forthwith, and to pay the complainant, within a reasonable given time, the damages, if any, to which the commission may find the complainant justly entitled in consequence thereof.

And if such damages shall be paid as required, and the commission shall be satisfied that the transportation company has ceased to practice the extortion or unjust discrimination complained of, an order to that effect shall be entered of record by the commission, and the transportation company shall be relieved of liability for any other penalty for the particular act complained of.

SEC. 6. That if any transportation company engaged in interstate commerce shall neglect or refuse to pay the damages assessed against it by the interstate commerce commission, and to desist from the further violation of this act, it shall be the duty of the commission to certify the facts to the district attorney of the United States for the judicial district in which the act complained of occurred; and it shall be the duty of the district attorney, at the request of the complainant, to forthwith commence such proceedings, in the name of the complainant, as may be necessary to recover any damages sustained by him, or to compel the transportation company to comply with the provisions of this act, or both; and the Circuit Court of the United States for said district shall have jurisdiction to try said cause, without regard to the citizenship of the parties. Costs shall be awarded as in other cases; but in case judgment is rendered against the defendant, the court may, in its discretion, allow to the district attorney a reasonable fee for prosecuting said cause, to be taxed as part of the costs; and in case of failure to recover, the complainant shall pay the costs of suit, attorney's fees excepted.

Any such transportation company that shall be convicted under the provisions of this act of either extortion or unjust discrimination shall forfeit and pay for each offense a fine of not exceeding $1,000.

Any such transportation company that shall neglect or refuse to make such annual reports as the commission may require, or that shall neglect or refuse to answer any question or to produce any book, paper, contract, or other document, or properly certified abstract thereof, called for by the commission in making any investigation under the authority of this act, shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be fined in a sum not exceeding $1,000 for each offense herein described.

Any such transportation company, or any person or persons that shall violate any of the provisions of this act not in this section specified, or that shall in any manner attempt to obstruct the enforcement of its provisions, shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be fined in a sum not exceeding $1,000.

SEC. 7. That each commissioner shall receive an annual salary of $7,500, payable in the same manner as the salaries of judges of the courts of the United States. The commission shall appoint a secretary, who shall receive an annual salary of $3,500, payable in like manner. The commission shall have authority to employ and fix the compensation of such other employés as it may find necessary to the proper performance of its duties, subject to the approval of the Secretary of the Interior. All necessary traveling expenses incurred by the commissioners, or by their employés under their orders, in making any investigation in any other place than in the city of Washington, shall be allowed and paid on the approval by the Secretary of the Interior of itemized vouchers therefor. The commission shall be furnished by the Secretary of the Interior with suitable offices and all necessary office supplies. Witnesses summoned before the commission shall be paid the same fees and mileage that are paid to witnesses in the courts of the United States. All of the expenses of the commission shall be paid on the presentation of vouchers approved by the president of the commission and by the Secretary of the Interior.

SEC. 8. That the commission may make such orders as it may deem necessary for the regulation of its business, and prescribe the forms to be used therein. A majority of the commission shall constitute a quorum for the transaction of business, except as hereinafter provided.

SEC. 9. That in making any investigation required by this act the commission shall have power to summon and require the attendance of witnesses, to administer oaths, and to require the production of all books, papers, contracts, and documents, or properly certified abstracts thereof, relating to the matter under investigation and necessary for the information of the commission in connection therewith. The commission is hereby authorized to conduct investigations in such portions of the United States as it may deem necessary, and for that purpose may delegate the powers conferred by this section to any member or members of the commission.

SEC. 10. That the commission is hereby authorized to require annual reports from all transportation companies engaged in interstate commerce, to fix the time and prescribe the manner in which such reports shall be made, and to require from such companies specific answers to all questions upon which the commission may need information. Such annual reports will show in detail the amount of capital stock issued and the amounts paid therefor; the dividends paid; the number of stockholders; the funded and floating debts and the interest paid thereon; the cost and value of the company's property, franchises, and equipment, with a complete description of the same; the number of employés and the salaries paid each class; the amounts expended for improvements each year, and how expended; the monthly earnings and receipts from each branch of business and from all sources; the monthly operating and other expenses; the balances of profit and loss, and a complete exhibit of the financial operations of the company each year. Such reports shall also contain such information in relation to rates or regulations concerning fares or freights, or agreements, arrangements, or contracts with other companies, as the commission may require.

Sec. 11. That the commission shall, on or before the first day in December in each year, make a report to the Secretary of the Interior, which shall be by him transmitted to Congress, and copies of which shall be distributed as are the other reports issued from the Interior Department. This report shall contain such information and data collected by the commission as may be considered of value in the determination of questions connected with the regulation of interstate commerce, together with such recommendations as to additional legislation for the regulation of interstate commerce as the commission may deem necessary. And said commission shall precede its first report with an investigation of the subject of interstate commerce, which shall embrace the subjects of establishing a system of both maximum and minimum charges for transportation, and for the preservation of free competition within the limits so fixed; for the prohibition of discriminations of any kind whatever, either in favor of or against cities, towns, or other localities, whether the same be competing or non-competing points, and for applying the same principle to transportation for individuals, firms, associations, or corporations, in all matters relating to commerce among the States; for the preservation and enforcement of the right of shippers to select the lines and parts of lines over which their shipments shall pass, to the end that said commerce among the States may avail itself of the all-rail or part rail and part water routes of the country; for the prevention of such pooling arrangements and agreements to refrain from just competition as may tend to impose unreasonable burdens upon said commerce among the States, and for the protection of said commerce against unjust exactions based on a class of securities commonly denominated "watered stock"; and said commission, in conducting said investigation, shall be guided by such rules of action as will be fair, just, and equitable toward all of the interests involved, whether the same be private, public, or corporate, connected with the subject of commerce among the States.

Sec. 12. That the route of any transportation company engaged in interstate commerce shall include all the railroad and water routes in use by such company, whether owned by said company or used by it under license, lease, or permission otherwise given. And it shall be unlawful for any transportation company as aforesaid to enter into any combination, contract, or agreement, expressed or implied, to prevent, by change of time-schedule, carriage in different cars, or by other means or devices, the carriage of interstate-commerce freights from being continuous from the place of shipment to the place of destination, whether said freight is carried on one or several railroads, or partly by rail and partly by vessel. And no break of bulk, stoppage, or interruption made by said transportation company shall prevent the carriage of any interstate-commerce freights from being and being treated as one continuous carriage from the place of shipment to the place of destination, unless such break, stoppage, or interruption was made in good faith for some necessary purpose, and without any intent to avoid or unnecessarily interrupt such continuous carriage or to evade any of the provisions of this act.

Sec. 13. That the term "transportation company engaged in interstate commerce," as used in this act, shall be deemed and taken to mean any corporation, company, or individual now owning, operating, or using any railroad or railroads, or any vessel or vessels, in whole or in part, which are run by or for any railroad company making part of its route, or that they may have the right, license, or permission to operate, use, or control any railroad or railroads, or any vessel or vessels, in whole or in part, provided said corporation, company, or individual is engaged in the business of transporting freights or property of any description by railroad, or partly by railroad and partly by water, from one State into another State or Territory of the United States, or from any Territory into any State or any other Territory; and the provisions of this act shall apply to all persons, firms, and companies, and to all associations of persons or companies, whether incorporated or not, and to all associations or corporations engaged in thus transporting freights or property of any description, in the manner above set forth, from one State into any other State or Territory, or from any Territory into any State or any other Territory.

Sec. 14. That the provisions of this act shall be construed as applicable to all railroad or transportation companies engaged in the carrying of freight from any place in the United States through any foreign territory to any other place in the United States, or from any place in the United States to any place outside the United States: *Provided*, That this shall not apply to transportation wholly by water.

Sec. 15. That the sum of $90,000 is hereby appropriated for the use and purposes of this act for the fiscal year ending June 30, A. D. 1885, and the intervening time anterior thereto; and it is expressly provided that no pending litigation between railroad companies shall in any way be affected by this act.

Sec. 16. That nothing in this act contained shall be held to require any person aggrieved by the act or omission of a transportation company within the provisions of this act to pursue the remedy provided in sections 5 and 6 hereof for the ascertainment and recovery of damages on account thereof, but such person may, by civil action in any court of competent jurisdiction, maintain an action as though this act had not been passed; and in such cases the duties, obligations, liabilities, and responsibilities of such transportation company in all respects shall be the same as though said action had been commenced in pursuance of the remedy in said sections 5 and 6 provided.

The vote on the adoption of the measure was as follows:

Yeas—Aldrich, Allison, Blair, Call, Cameron of Wisconsin, Chace, Conger, Cullom, Dawes, Dolph, Edmunds, Frye, Groome, Hampton, Harris, Harrison, Hawley, Hill, Hoar, Ingalls, Jackson, Jonas, Jones of Florida, Jones of Nevada, Lamar, Lapham, McMillan, Manderson, Miller of California, Miller of New York, Mitchell, Morrill, Pike, Platt, Plumb, Pugh, Riddleberger, Sawyer, Sewell, Sherman, Slater, Vest, Wilson—43.

Nays—Bayard, Butler, Cockrell, Coke, Colquitt, McPherson, Maxey, Morgan, Pendleton, Saulsbury, Vance, Van Wyck—12.

Absent—Beck, Bowen, Brown, Camden, Cameron of Pennsylvania, Fair, Farley, Garland, George, Gibson, Gorman, Hale, Kenna, Logan, Mahone, Palmer, Ransom, Sabin, Voorhees, Walker, Williams—21.

Feb. 7 and Feb. 27 Mr. Reagan asked unanimous consent to call up the Senate bill for consideration in the House, but on both occasions objection was made and the measure failed.

General Grant.—Among the recommendations in the President's message was one in favor of pensioning General Grant, and Dec. 4, 1884, Mr. Mitchell, of Pennsylvania, introduced in the Senate a bill for that purpose, which was referred to the Committee on Pensions. Dec. 8, 1884, the same gentleman asked and obtained leave to withdraw the measure. This course he took in consequence of a letter from General Grant in which he said: "I learn through the press that you have introduced a bill in the Senate placing me on the pension list of the nation. I understand the motive which has prompted this action on your part and appreciate it very highly. But I beg you to withdraw the bill. Under no circumstances could I accept a pension, even if the bill should pass both houses and receive the approval of the President."

During the first session of the Forty-eighth Congress a bill for the retirement of General Grant as General of the Army was reported by Mr. Edmunds, of Vermont, and passed the Senate as follows:

> *Be it enacted, etc.*, That in recognition of the eminent public services of Ulysses S. Grant, late General of the Army, the President be and he hereby is authorized to nominate and, by and with the advice and consent of the Senate, to appoint him a general on the retired-list of the army, with the rank and full pay of General of the Army.

The form of this bill would bring it within the scope of the objections to the bill restoring Fitz-John Porter to his rank in the army which the President vetoed as trenching upon the constitutional prerogatives of the Executive; consequently, as early as Jan. 13, 1885, Mr. Edmunds, from the Committee on Military Affairs, introduced the following measure in the Senate, designed to satisfy the popular demand for the retirement of General Grant, and avoid forcing upon the President the disagreeable alternative of seeming to oppose that demand or of discrediting his own official action:

> *Be it enacted, etc.*, That the President of the United States be and he hereby is authorized, by and with the advice and consent of the Senate, to appoint on the retired list of the Army of the United States, from among those who have been generals commanding the armies of the United States, or generals-in-chief of said army, one person, and the total number now allowed by law to compose said retired list shall be, on such appointment, increased accordingly.

January 14, the bill was amended by inserting after the word person the words "with the rank and full pay of such general or general-in-chief as the case may be." In opposition to the measure, Mr. Cockrell, of Missouri, said: "I desire to record my vote against the bill, not knowing whether the yeas and nays will be called upon its passage or not. I think there is neither justice nor propriety in it. The retired list of the army was created expressly for officers of the army in the service who, by reason of age or disabilities incident to the service, have become unfit for that service, and must either be discharged from the army or must continue in the army, an incubus and burden to it, and drawing their full pay, or be in some other manner provided for. We have provided the retired list for those persons, and with my consent no one occupying a civil position, no matter what military position he may have heretofore occupied, shall ever be placed upon that retired list. It is not the place for persons who are not in the army and serving in the line of duty, and I think there is no reason for this proposed action."

Mr. Edmunds, in reply, said:

"I agree with the policy that my distinguished friend from Missouri has stated, that it is not good policy as a rule to place private citizens on the retired list of the army, or to give them pensions, or to do anything for them that we do not do for all private citizens. I am a democrat of democrats on that point; and yet as one citizen of the United States and one Senator of the Senate of the United States I am glad to have the opportunity to urge the passage of this bill. General Grant was educated at West Point. He served his country faithfully and gallantly in the Mexican War while a young lieutenant; I believe that was his rank at that time. He became General of the armies of the United States on an occasion of very considerable importance and interest. I state it mildly in order not to excite the temperament of anybody on either side of the Chamber. He was removed from the office of General of the armies of the United States from which he would have been retired when he reached the proper age and put on this very list, to assume again command of the armies of the United States as Commander-in-Chief under its Constitution. He did not seek it; he obeyed the call of duty. That removed him from the technical place that he held in the army as an officer of it to a higher place, as the constitutional commander of it instead of the commander of it under the law. When his term expired he became, it is true, a private citizen. In that state of the case, with the circumstances that we know and with the honor and the respect and the gratitude and the duty that we owe to him as *primus inter illustres* in the history of this country, I should be glad to have a unanimous vote in favor of the passage of this bill. I hope I shall get very nearly it."

The bill passed the Senate by the following vote:

YEAS—Aldrich, Allison, Blair, Brown, Camden, Cameron of Wisconsin, Colquit, Conger, Cullom, Dawes, Dolph, Edmunds, Fair, Frye, Garland, George, Gibson, Gorman, Hale, Hampton, Harrison, Hawley, Hoar, Ingalls, Jackson, Jonas, Jones of Florida, Kenna, Lapham, McMillan, McPherson, Manderson, Maxey, Miller of California, Mitchell, Morgan, Morrill, Palmer, Platt, Pugh, Riddleberger, Sabin, Sawyer, Sewell, Sheffield, Sherman, Voorhees, Williams, Wilson—49.

Nays—Beck, Cockrell, Coke, Harris, Pendleton, Saulsbury, Slater, Vance, Walker—9.

Absent—Bayard, Bowen, Butler, Call, Cameron of Pennsylvania, Farley, Groome, Hill, Jones of Nevada, Lamar, Logan, Mahone, Miller of New York, Pike, Plumb, Ransom, Van Wyck, Vest—18.

Feb. 3, the President sent to the House of Representatives the following message:

To the House of Representatives:

I take especial pleasure in laying before Congress the generous offer made by Mrs. Grant to give to the Government, in perpetual trust, the swords and military (and civil) testimonials lately belonging to Gen. Grant. A copy of the deed of trust, and of a letter addressed to me by Mr. William H. Vanderbilt, which I transmit herewith, will explain the nature and motives of this offer.

Appreciation of Gen. Grant's achievements and recognition of his just fame have in part taken the shape of numerous mementos and gifts, which, while dear to him, possess for the nation an exceptional interest. These relics, of great historical value, have passed into the hands of another whose considerate action has restored the collection to Mrs. Grant as a life-trust, on the condition that at the death of Gen. Grant, or sooner at Mrs. Grant's option, it should become the property of the Government, as set forth in the accompanying papers. In the exercise of the option thus given her Mrs. Grant elects that the trust shall forthwith determine, and asks that the Government designate a suitable place of deposit and a responsible custodian for the collection.

The nature of this gift and the value of the relics which the generosity of a private citizen, joined to the high sense of public regard which animates Mrs. Grant, have thus placed at the disposal of the Government, demand full and signal recognition on behalf of the nation at the hands of its representatives. I therefore ask Congress to take suitable action to accept the trust and to provide for its secure custody, at the same time recording the appreciative gratitude of the people of the United States to the donors.

In this connection I may pertinently advert to the pending legislation of the Senate and House of Representatives looking to a national recognition of Gen. Grant's eminent services by providing the means for his restoration to the army on the retired list. That Congress, by taking such action, will give expression to the almost universal desire of the people of this nation is evident; and I earnestly urge the passage of an act similar to Senate bill No. 2530, which, while not interfering with the constitutional prerogative of appointment, will enable the President in his discretion to nominate Gen. Grant as General upon the retired list. Chester A. Arthur.

Executive Mansion, *Feb.* 3, 1885.

February 16, in the House, Mr. Slocum, of New York, under instructions from the Committee on Military Affairs, moved to suspend the rules, take from the Speaker's table and put upon its passage the bill for the retirement of Gen. Grant passed by the Senate in the first session of the Forty-eighth Congress. Debate was limited to half an hour, but it was bitter if brief. Mr. Rosecrans, of California, opposed the measure on its merits. He said:

"It is my duty to say that in reality the bill is a plain proposition to reward Gen. Grant for his distinguished military services, and it is my duty to say that I can not vote for that bill. It is not my intention, sir, to recount any of the historical reasons why I think that military reputation has been exaggerated and misrepresented under the exigencies of party interest and power; and can only suggest that, when true history comes to be written, it will be pared down to very different dimensions. I do not propose to go into that subject, sir, although I am one of the four living army commanders contemporary with him, and would feel quite qualified to express opinions of my own on that subject. But, Mr. Speaker, this House by the passage of this bill is called upon by solemn act to renew and reaffirm all the exaggerations and misstatements of fact which have been popularly impressed on the public mind under the circumstances to which I have alluded. It was the interest of a great political party of this country to make the services of Gen. Grant appear as large and important as possible, for he was their servant and tool to secure power. He himself kept an aide-de-camp in his back office, and there prepared the first two volumes of Badeau's 'Life of Grant,' upon which the students of history have put the stamp of unworthiness to be trusted."

But the chief opposition was due to the complication arising out of the Fitz-John Porter veto. Mr. Horr, of Michigan, in voicing that opposition, said:

"There now lies on our table another bill drawn by Senator Edmunds, when that Senator learned that this bill was open to objections conscientiously held by the President which might prevent him from signing it. This latter bill, drawn to obviate that difficulty, was passed by the Senate and sent to this House, was before the committee now reporting this bill, and they purposely refused to substitute that in place of this measure, and reported this bill, which they must have known was liable to prevent Gen. Grant from being put on the retired list. The last bill of Senator Edmunds was before that committee, and an attempt was made in that committee to substitute that bill for this one upon the very ground that the position of the President, conscientiously taken in the Fitz-John Porter case, might prevent him from signing this bill, and therefore prevent it from ever becoming a law. But that committee, knowing and fully understanding this difficulty, refused to make the change.

"Mr. Speaker, I have spent twenty-two years of my life standing by Gen. Grant and his character when he has been vilified by men in this nation as no other man ever was who breathed the breath of life in the United States. And now I say you attempt to force us here into a false position, to force us to vote for a bill purposely—I say it advisedly—purposely brought in here to put the Executive of the nation, as one of the gentlemen of the committee said, into a tight place, knowing that his decision, conscientiously made in another case, might, perhaps, prevent him from signing this bill. Now, then, gentlemen, if you will substitute the Edmunds bill, which is not open to this objection, we will vote for it unanimously on this side of the House, and, if you want to place Gen. Grant on the retired list, give us a bill which you yourselves know can and will be signed with great pleasure, but do not try to cast stones before this people when we are demanding bread. This bill is presented here not in the interest of Gen. Grant, but simply to spite some one else. To that I most solemnly object."

Mr. Bayne, of Pennsylvania, in vindication of the motion, said:

"Mr. Speaker, in two minutes I can say but little. Against this bill are arrayed, first, the prejudices of most of the men whom Gen. Grant conquered; I am sorry to see it. Against this bill are arrayed, secondly, the personal dislikes felt by a few individuals; I am sorry to see it. Against this bill are arrayed, thirdly, the political resentments of Republicans because Gen. Grant's name is in the body of the bill and because the President vetoed a similar bill. I am sorry to see it; for no such motives should influence any man occupying the responsible position of a member of the House of Representatives; and in yielding to such motives he can not by any possibility excuse himself. I believe implicitly in the power of the American Congress to pass this bill and to name the man to be benefited. It simply authorizes the President, with the approval of the Senate, to appoint Gen. Grant to an office, if the President, in the exercise of his discretion, sees fit to do so. It is not mandatory. It does not say to the President, 'Thou shalt,' but only says to him, 'You may, if in your judgment you believe it to be proper and right to do so.' The bill is in accordance with the practice under the Constitution from the foundation of the Government; and the very President who now occupies the executive chair has signed three bills containing provisions precisely similar to those in this bill. I can see no justification under heaven for denying to Gen. Grant, who was the great benefactor of his country and almost the saviour, this little boon. When any man interposes his prejudices or resentments or personal feelings against this most righteous act he does that which will not commend itself either to his own conscience or to the approval of the people of the United States."

The motion to suspend the rules failed by the following vote, not receiving the necessary two thirds:

Yeas—Anderson, Arnot, Atkinson, Bagley, Bayne, Beach, Belford, Bingham, Boutelle, Brainerd, Bratton, Breckinridge, Breitung, J. H. Brewer, Broadhead, W. W. Brown, T. M. Browne, Budd, Burleigh, Felix Campbell, J. E. Campbell, Cannon, Cassidy, Clardy, Collins, S. S. Cox, W. W. Culbertson, Cullen, Curtin, Dargan, G. R. Davis, R. T. Davis, Deuster, Dibrell, Dingley, Dixon, Dorsheimer, Elliott, Ellis, Ellwood, Evans, Everhart, Fiedler, Finerty, Follett, Funston, Fyan, Garrison, George, Glascoek, Goff, Graves, Greenleaf, Guenther, Hancock, Hardy, Harmer, Hart, H. H. Hatch, Haynes, T. J. Henderson, Henley, Hitt, Hoblitzell, Holmes, Houseman, Howey, Hunt, James, Jeffords, B. W. Jones, Kean, Keifer, Kelley, Ketcham, King, Kleiner, Lacey, Lawrence, Lewis, Libbey, Long, Lovering, Lyman, McAdoo, McCoid, McComas, McCormick, Maybury, Millard, S. H. Miller, Milliken, Mitchell, Morgan, Morrill, Morse, Murphy, Nelson, Nicholls, Nutting, O'Hara, Charles O'Neill, J. J. O'Neill, Paige, Parker, Payne, Payson, Peters, Pettibone, Phelps, Poland, Potter, Pusey, Randall, Ranney, G. W. Ray, Ossian Ray, Rice, W. E. Robinson, Rowell, Russell, Ryan, Seney, Seymour, C. R. Skinner, Slocum, Smalls, A. Herr Smith, H. Y. Smith, Snyder, Spooner, Steele, Stephenson, Stevens, J. W. Stewart, Stone, Struble, C. A. Sumner, D. H. Sumner, Talbott, J. D. Taylor, Thompson, Tillman, Tully, Valentine, Wadsworth, Wait, Wakefield, Washburn, Weaver, Milo White, Whiting, Wilkins, Willis, James Wilson, W. L. Wilson, John Winans, Worthington—158.

Nays—Aiken, Alexander, Ballentine, Barbour, Barksdalo, Bennett, Blackburn, Blanchard, Bland, Blount, Buchanan, Buckner, Burnes, Cabell, Caldwell, Carleton, Clay, Clements, Cobb, Connolly, Converse, Cosgrove, Covington, W. R. Cox, Crisp, Davidson, L. H. Davis, Dibble, Dockery, Dowd, Dunn, Eaton, Eldredge, Ermentrout, Forney, Geddes, Gibson, Green, Halsey, Hammond, Hanback, W. H. Hatch, Hemphill, Herbert, G. W. Hewitt, Hill, Holman, J. H. Jones, J. K. Jones, J. T. Jones, Lanham, Le Fevre, Lowry, McMillin, Matson, J. F. Miller, Mills, Money, Moulton, Muldrow, Murray, Mutchler, Neece, Oates, O'Ferrall, Peel, Pierce, Price, Pryor, Reagan, J. W. Reid, Reese, Riggs, J. H. Rogers, Rosecrans, Shively, Singleton, T. G. Skinner, Springer, Charles Stewart, Stockslager, Swope, J. M. Taylor, Thomas, Tucker, H. G. Turner, Oscar Turner, Van Alstyne, Vance, Wallace, Ward, A. J. Warner, Richard Warner, Wellborn, Weller, Williams, E. B. Winans, G. D. Wise, Wolford, Wood, Woodward, Yaple, York—103.

Not Voting—G. E. Adams, J. J. Adams, Barr, Belmont, Bisbee, Bowen, Boyle, F. B. Brewer, Brumm, J. M. Campbell, Candler, Chalmers, Cook, Craig, D. B. Culberson, Cutcheon, Dunham, English, Ferrell, Findlay, Foran, Hardeman, D. B. Henderson, Hepburn, A. S. Hewitt, Hiscock, Holton, Hooper, Hopkins, Horr, Houk, Hurd, Hutchins, Johnson, Jordan, Kellogg, Laird, Lamb, Lore, Morrison, Muller, Ochiltree, Patton, Perkins, Post, Rankin, T. B. Reed, Robertson, J. S. Robinson, Rockwell, W. F. Rogers, Shaw, Spriggs, Storm, Strait, E. B. Taylor, Throckmorton, Townshend, Van Eaton, Wemple, J. D. White, J. S. Wise, Young—63.

March 3, on motion of Mr. Randall, of Pennsylvania, the House suspended the rules to take from the Speaker's table and put upon its passage Mr. Edmunds's second bill for the retirement of General Grant as passed by the Senate. The vote was as follows:

Yeas—G. E. Adams, J. J. Adams, Anderson, Atkinson, Bagley, Barr, Bayne, Beach, Bingham, Bisbee, Boutelle, Brainerd, Bratton, Breckinridge, F. B. Brewer, Broadhead, T. M. Browne, W. W. Brown, Brumm, Budd, Felix Campbell, J. E. Campbell, J. M. Campbell, Cannon, Carleton, Cassidy, Clardy, Collins, Connolly, Converse, S. S. Cox, W. W. Culbertson, Cullen, Curtin, Cutcheon, Dargan, G. R. Davis, R. T. Davis, Deuster, Dibble, Dingley, Dorsheimer, Dunham, Elliott, Ellis, Ellwood, English, Ermentrout, Evans, Everhart, Ferrell, Fiedler, Findlay, Finerty, Follett, Foran, Frederiek, Funston, Fyan, Garrison, George, Glascock, Goff, Graves, Greenleaf, Guenther, Hanback, Hancock, Hardy, Hart, H. H. Hatch, Haynes, D. B. Henderson, T. J. Henderson, Hepburn, A. S. Hewitt, Hiscoek, Hitt, Hoblitzell, Holmes, Holton, Hopkins, Horr, Houseman, Howey, Hunt, Hurd, Hutchins, James, Jeffords, Johnson, B. W. Jones, J. K. Jones, Jordan, Kean, Keifer, Kelley, Kellogg, King, Kleiner, Laey, Laird, Lamb, Lawrence, Le Fevre, Libbey, Long, Lore, Lovering, Lowry, Lyman, McAdoo, McCoid, McComas, McCormick, Maybury, Millard, S. H. Miller, Milliken, Mitchell, Morgan, Morrill, Moulton, Muller, Murphy, Murray, Mutchler, Nelson, Nicholls, Nutting, Ochiltree, O'Hara, Charles O'Neill, Paige, Parker, Payne, Payson, Perkins, Peters, Pettibone, Phelps, Poland, Post, Potter, Pusey, Randall, Ranney, Ossian Ray, T. B. Reed, Riggs, W. E. Robinson, Rockwell, W. F. Rogers, Rowell, Russell, Ryan, Seney, Seymour, C. R. Skinner, Smalls, Snyder, Spooner, Spriggs, Steele, Stephenson, Stevens, J. W. Stewart, Stone, Storm, Strait, Struble, C. A. Sumner, Talbott, J. D. Taylor, Thomas, Thompson, Tillman, Townshend, Tully, Van Alstyne, Vance, Wadsworth, Wait, Wakefield, Wallace, Ward, Washburn, Weaver, Wemple, J. D. White, Milo White, Whiting, Wilkins, Willis, Wilson, John Winans, J. S. Wise, Worthington—198.

Nays—Alexander, Ballentine, Barbour, Barksdale, Belmont, Bennett, Blackburn, Blanchard, Blount, Buchanan, Buckner, Cabell, Caldwell, Clay, Clements, Cobb, Cook, Cosgrove, Covington, W. R. Cox, Crisp, D. B. Culberson, Davidson, L. H. Davis, Dibrell, Dockery, Dowd, Eaton, Eldredge, Forney, Geddes, Gibson, Green, Halsell, Hammond, W. H. Hatch, Hemphill, G. W. Hewitt, Hill, J. H. Jones, Lanham, McMillin, Matson, J. F. Miller, Mills, Money, Muldrow, Neece, Oates, O'Ferrall, Patton, Pierce, Price, Pryor, Reagan, J. W. Reid, Reese, J. H. Rogers, Rosecrans, Shively, Singleton, T. G. Skinner, A. Herr Smith, Charles Stewart, Stockslager, Swope, J. M. Taylor, Tucker, H. G. Turner, Oscar Turner, Van Eaton, Richard Warner, Wellborn, E. B. Winans, G. D. Wise, Wolford, Wood, Woodward, Yaple—79.

Not Voting—Aiken, Arnot, Belford, Bland, Bowen, Boyle, Breitung, J. H. Brewer, Burleigh, Burnes, Candler, Chalmers, Dixon, Dunn, Hardeman, Harmer, Henley, Herbert, Holman, Hooper, Houk, J. T. Jones, Ketcham, Lewis, Morrison, Morse, J. J. O'Neill, Peel, Rankin, G. W. Ray, Rice, Robertson, J. S. Robinson, Shaw, Slocum, H. Y. Smith, Springer, D. H. Sumner, E. B. Taylor, Throckmorton, Valentine, A. J. Warner, Weller, Williams, York, Young—46.

So the bill was passed and immediately approved by the President, who, on the same day, March 3, sent in to the Senate the nomination of "Ulysses S. Grant, formerly commanding the armies of the United States, to be General on the retired list of the army with the full pay of such rank." The nomination was confirmed unanimously.

Counting the Electoral Vote.—Jan. 12, 1885, Mr. Hoar, of Massachusetts, from the Committee on Privileges and Elections, introduced in the Senate the following resolution in regard to counting the electoral votes:

Resolved by the Senate (the House of Representatives concurring), That the two houses of Congress shall assemble in the hall of the House of Representatives the 11th of February, 1885, at twelve o'clock noon, pursuant to the requirement of the Constitution and laws relating to the election of President and Vice-President of the United States, and the President of the Senate shall be the presiding officer; that two persons be appointed tellers on the part of the Senate, and two on the part of the House of Representatives, to make a list of the votes as they shall be declared; that the result shall be delivered to the President of the Senate, who shall announce the state of the vote and the persons elected to the two houses assembled as aforesaid, which shall be deemed a declaration of the persons elected President and Vice-President of the United States, and, together with a list of the votes, be entered on the journals of the two houses.

Jan. 28, Mr. Clay, of Kentucky, introduced in the House the following resolution on the same subject:

Resolved by the House of Representatives (the Senate concurring), That the two houses of Congress shall assemble in the hall of the House of Representatives at twelve o'clock noon on the 11th day of February, 1885, pursuant to the requirements of the Constitution and laws relating to the election of President and Vice-President of the United States, and the President of the Senate shall be the presiding officer.

That one person be appointed teller on the part of the Senate, and two persons appointed tellers on the part of the House of Representatives, to make a list of the votes as they shall be declared.

That the result shall be delivered to the President of the Senate, who shall announce the state of the vote and the persons elected to the two houses assembled as aforesaid, which shall be deemed a declaration of the persons elected President and Vice-President of the United States, and, together with a list of the votes, be entered on the journal of the two houses.

Jan. 29, this resolution passed the House, and Jan. 30 it passed the Senate, with an amendment providing for two tellers from the Senate. This amendment was made on the ground that it had been the uniform practice since the organization of the Government to appoint two tellers on the part of the Senate. The House concurred in the amendment, but Mr. Eaton, of Connecticut, in making the motion to agree to it, said: "I am compelled to say that the Senate has not examined the matter thoroughly. There have been, up to 1868, but two instances where there were two tellers on the part of the Senate. Always, with two exceptions, there has been but one teller on the part of the Senate, with two on the part of the House. But it is a matter of no significance whatever."

In the Senate, Mr. Hoar, of Massachusetts, and Mr. Pendleton, of Ohio, were appointed tellers, and in the House Mr. Clay, of Kentucky, and Mr. Keifer, of Ohio. On the appointed day, and at the hour set, the Senate entered the hall of the House of Representatives, preceded by its Sergeant-at-Arms, and headed by the President *pro tempore* of the Senate and the Secretary of that body, the officers and members of the House rising to receive them. Mr. Edmunds, of Vermont, President of the Senate, took his seat as presiding officer of the joint convention, with Mr. Blackburn, of Kentucky, Speaker *pro tempore* of the House, at his left hand, the tellers, the Secretary of the Senate, and the Clerk of the House, occupying the clerk's desk. Mr. Edmunds said:

"The two houses have met pursuant to the Constitution and the laws, and their concurrent resolution, for the purpose of executing the duty required by the Constitution and the laws in the matter of counting the electoral vote for President and Vice-President, cast by the electors in the several States, for the term commencing on the 4th of March, 1885. The President of the Senate will open the votes of the several States in their alphabetical order, and now opens the certificates from the State of Alabama, and hands to the chairman of the tellers on the part of the Senate the certificate of Alabama received by mail, and to the chairman of the tellers on the part of the House of

Representatives the certificate received by messenger. The certificate will be read."

After the announcement of the electoral votes of the several States, Mr. Edmunds called upon the tellers to report the state of the vote and give the result of their computations. Whereupon Mr. Hoar presented the following statement:

List of Votes for President and Vice-President of the United States, for the constitutional term to commence on the 4th day of March, 1885.

Number of electoral votes to which each State is entitled.	STATES.	For President.		For Vice-President.	
		Grover Cleveland, of New York.	James G. Blaine, of Maine.	Thomas A. Hendricks, of Indiana.	John A. Logan, of Illinois.
10	Alabama	10	..	10	..
7	Arkansas	7	..	7	..
8	California	..	8	..	8
3	Colorado	..	3	..	3
6	Connecticut	6	..	6	..
3	Delaware	3	..	3	..
4	Florida	4	..	4	..
12	Georgia	12	..	12	..
22	Illinois	..	22	..	22
15	Indiana	15	..	15	..
13	Iowa	..	13	..	13
9	Kansas	..	9	..	9
13	Kentucky	13	..	13	..
8	Louisiana	8	..	8	..
6	Maine	..	6	..	6
8	Maryland	8	..	8	..
14	Massachusetts	..	14	..	14
13	Michigan	..	13	..	13
7	Minnesota	..	7	..	7
9	Mississippi	9	..	9	..
16	Missouri	16	..	16	..
5	Nebraska	..	5	..	5
3	Nevada	..	3	..	3
4	New Hampshire	..	4	..	4
9	New Jersey	9	..	9	..
36	New York	36	..	36	..
11	North Carolina	11	..	11	..
23	Ohio	..	23	..	23
3	Oregon	..	3	..	3
30	Pennsylvania	..	30	..	30
4	Rhode Island	..	4	..	4
9	South Carolina	9	..	9	..
12	Tennessee	12	..	12	..
13	Texas	13	..	13	..
4	Vermont	..	4	..	4
12	Virginia	12	..	12	..
6	West Virginia	6	..	6	..
11	Wisconsin	..	11	..	11
401		219	182	219	182

George F. Hoar, George H. Pendleton, } Tellers on the part of the Senate.
J. Warren Keifer, J. F. Clay, } Tellers on the part of the House of Representatives.

Mr. Edmunds, the President of the Senate and of the joint convention, then said: "Senators and members of the House of Representatives, the tellers have reported to the presiding officer the state of the vote which you have heard, from which it appears that Grover Cleveland, of the State of New York, has received 219 votes for the office of President of the United States, and that James G. Blaine, of the State of Maine, has received 182 votes for the same office; that Thomas A. Hendricks, of the State of Indiana, has received 219 votes for the office of Vice-President of the United States, and that John A. Logan, of the State of Illinois, has received 182 votes for the same office.

"Wherefore, I do declare that Grover Cleveland, of the State of New York, has received a majority of the votes of the whole number of electors appointed, as they appear in the certificates read by the tellers, and so appears to have been elected President of the United States for four years, commencing on the 4th day of March, 1885; and that Thomas A. Hendricks, of the State of Indiana, has received a majority of the votes of the whole number of electors appointed, as they appear in the certificates read by the tellers, and so appears to have been elected Vice-President of the United States for four years, commencing on the 4th day of March, 1885. And the President of the Senate makes this declaration only as a public statement, in the presence of the two houses of Congress, of the contents of the papers opened and read on this occasion, and not as possessing any authority in law to declare any legal conclusion whatever."

After the return of the Senate to its own Chamber, and the reading of the report of the tellers on the proceedings of the joint convention assembled to count the electoral votes, Mr. Conger, of Michigan, said by way of protest against the closing declaration of the President *pro tempore* of the Senate in announcing to the joint convention the result of the vote: "Mr. President, the proper mode of presenting my view upon that question I do not know that I understand; but I desire here as one of the Senators of this body to say that I entirely dissent from the declaration that the President of the Senate has no other power in announcing the electoral vote than to merely announce the facts. I do not know by what authority a question so long in dispute, and perhaps with the views of the Senate and of the people of the United States almost equally divided, should be attempted to be settled by making a statement of one view of it a part of the declaration. I merely speak of it, however, to express my dissent from that declaration of the presiding officer that he is only to make a statement of the result, and has no other power in the case."

Mr. Sherman, of Ohio, and Mr. Ingalls, of Kansas, concurred in this criticism, and the latter offered the following resolution, which was subsequently referred to the Committee on Privileges and Elections:

Resolved, That the Senate does not assent to the concluding declaration of the President of the Senate in the announcement of the vote for President and Vice-President of the United States made in the presence of the two houses of Congress this day.

Mr. Edmunds, the President *pro tempore* of the Senate, said in explanation: "The Chair begs leave to state, with the indulgence of the Senate, that the Senate, in the opinion of the Chair, is in no way responsible for the declaration that the President of the Senate made on the occasion referred to. Neither the Senate of the United States nor the House of Representatives had conferred any authority upon the President of the Senate to make any declaration. There is no law, within the knowledge of the President of the Senate, which provides for any proceeding, except the Constitution. The President of the Senate was of opinion, and still is, that a concurrent resolution is not a law; and if the concurrent resolution providing for this occasion had contained any direction to the President of the Senate that was inconsistent with his views of constitutional duty, he would have been bound to disregard it, or preferably, as he certainly would have done, he would have resigned his office and allowed the Senate freely to elect some gentleman whose opinion coincided with that of the majority. No Senator need feel bound as a precedent by anything the President of the Senate said. He was exerting a constitutional duty in opening the certificates and superintending the making manifest of what they contained; and he stated on his own responsibility, and on that of nobody else, the negation of an implication that might have arisen from a different statement of the result; that is all."

Mr. Hoar offered the following resolution, declaring the result of the electoral count, which was referred next day to the Committee on Privileges and Elections:

Whereas, the Senate having met the House of Representatives in accordance with the fifth section of the act of 1st March, 1792, relative to the election of President and Vice-President of the United States, and the electoral votes having been opened by the President of the Senate in the presence of the two houses of Congress and counted by the tellers appointed on the part of the two houses, and it appearing that the whole number of electors appointed to vote for President and Vice-President of the United States is 401, of which a majority is 201; and it further appearing that Grover Cleveland, of New York, had received 219 votes for President of the United States, and that Thomas A. Hendricks, of Indiana, had received 219 votes for Vice-President of the United States, which number is a majority of the votes of the whole number of electors appointed, and the same having been duly declared by the President of the Senate in the presence of the two houses: Therefore,

Resolved by the Senate of the United States, That the Senate is of opinion that the Constitution and laws have been duly executed, and that no further declaration of these facts is necessary.

In the House, after the report of the tellers in regard to the proceedings of the joint convention to count the electoral votes, Mr. Keifer, of Ohio, presented the same resolution, *mutatis mutandis*, which, on motion of Mr. Cox, of New York, was laid on the table by the following vote:

Yeas—J. J. Adams, Aiken, Alexander, Bagley, Ballentine, Barbour, Barksdale, Bayne, Beach, Bennett, Blackburn, Boyle, Brainerd, Broadhead, T. M. Browne, Buchanan, Budd, Burleigh, Burnes, Cabell, Caldwell, Felix Campbell, J. E. Campbell, Candler, Carleton, Cassidy, Clardy, Clements, Converse, Covington, S. S. Cox, W. R. Cox, Crisp, D. B. Culberson, Dargan, L. H. Davis, Dibrell, Dockery, Dorsheimer, Dowd, Dunn, Eaton, Eldredge, Elliott, English, Follett, Garrison, Geddes, Gibson, Graves, Green, Greenleaf, Hanback, Hardy, H. H. Hatch, W. H. Hatch, Henley, Herbert, A. S. Hewitt, Hill, Hopkins, Houseman, Hunt, Hurd, Hutchins, Jeffords, Johnson, B. W. Jones, J. H. Jones, J. K. Jones, Lanham, Long, Lore, Lovering, Lowry, Lyman, McCoid, Maybury, J. F. Miller, Money, Morgan, Morse, Moulton. Muldrow, Muller, Murphy, Mutchler, Neece, Oates, O'Ferrall, J. J. O'Neill, Payson, Peel, Pryor, Pusey, Ranney, Reagan, Reese, Robertson, W. E. Robinson, Rockwell, J. H. Rogers, Russell, Ryan, Seney, Seymour, Shively, Singleton, Spriggs, Springer, Steele, Stevens, Charles Stewart, J. W. Stewart, Swope, Talbott, J. M. Taylor, Thompson, Tillman, Tucker, Van Alstyne, Van Eaton, Wallace, A. J. Warner, Richard Warner, Weaver, Wellborn, Wemple, Wilkins, Williams, Willis, W. L. Wilson, John Winans, Wolford, Wood, York, Young—137.

Nays—G. E. Adams, Anderson, Bingham, Bisbee, Bland, Blount, Boutelle, F. B. Brewer, J. H. Brewer, W. W. Brown, Brumm, J. M. Campbell, Cannon, Clay, Connolly, Cosgrove, W. W. Culbertson, Cullen, Cutcheon, Davidson, G. R. Davis, R. T. Davis, Dibble, Dingley, Ellwood, Ermentrout, Evans, Everhart, Fiedler, Findlay, Finerty, Forney, Fyan, Guenther, Halsell, Hammond, Hancock, Hardeman, Harmer, Hart, Haynes, Hemphill, T. J. Henderson, Hepburn, G. W. Hewitt, Hiscock, Hoblitzell, Holman, Holmes, Horr, Houk, Keifer, Ketcham, Lawrence, Le Fevre, Lewis, Libby, McComas, McCormack, McMillin, Millard, Morrill, Nicholls, Nutting, Charles O'Neill, Paige, Parker, Patton, Perkins, Peters, Pierce, Poland, Post, Potter, Randall, Ossian Ray, J. W. Reid, Rice, Rowell, C. R. Skinner, T. G. Skinner, A. Herr Smith, H. Y. Smith, Snyder, Spooner, Stephenson, Stockslager, Stone, Storm, Strait, Struble, D. H. Sumner, E. B. Taylor, J. D. Taylor, Thomas, Townshend. Tully, H. G. Turner, Oscar Turner, Valentine, Vance, Wadsworth, Wait, Wakefield, Ward, Washburn, Milo White, James Wilson, E. B. Winans, G. D. Wise, Woodward, Worthington, Yaple—113.

Not Voting—Arnot, Atkinson, Barr, Belford, Belmont, Blanchard, Bowen, Bratton, Breckinridge, Breitung, Buckner, Chalmers, Cobb, Collins, Cook, Craig, Curtin, Deuster, Dunham, Ellis, Ferrell, Foran, Funston, George, Glascock, Goff, D. B. Henderson, Hitt, Holton, Hooper, Howey, James, J. T. Jones, Jordan, Kean, Kelley, Kellogg, King, Kleiner, Lacey, Laird, Lamb, McAdoo, Matson, S. H. Miller, Milliken, Mills, Mitchell, Morrison, Murray, Nelson, Ochiltree, O'Hara, Payne, Pettibone, Phelps, Price, Rankin, G. W. Ray, T. B. Reed, Riggs, J. S. Robinson, W. F. Rogers, Rosecrans, Shaw, Slocum, Smalls, C. A. Sumner, Throckmorton, Weller, J. D. White, Whiting, J. S. Wise—73.

Mr. Clay, of Kentucky, then offered the following concurrent resolution, which was amended by striking out everything but the first paragraph, and was passed as amended:

Resolved by the House of Representatives (*the Senate concurring*), That a committee of two members of the House be appointed by the House, and one member of the Senate be appointed by that body, to wait on Grover Cleveland, of the State of New York, and to notify him that he has been duly elected President of the United States for four years, commencing with the 4th day of March, 1885; and also to notify Thomas A. Hendricks, of the State of Indiana, that he has been duly elected Vice-President of the United States for four years, commencing with the 4th day of March, 1885.

2. That the President of the Senate do make out and sign a certificate in the words following:

CERTIFICATE OF ELECTION.

Be it known that the Senate and House of Representatives of the United States of America, having been convened in the city of Washington, on the second Wednesday in February, in the year of our Lord 1885, the underwritten President of the Senate *pro tempore* did, in the presence of the said Senate and House of Representatives, open all the certificates and count all the votes of the electors for President and Vice-President of the United States; whereupon it appeared that Grover Cleveland, of the State of New York, had a majority of the votes of the electors as President, and Thomas A. Hendricks, of the State of Indiana, had a majority of the votes of the electors as Vice-President.

By all of which it appears that Grover Cleveland, of the State of New York, has been duly elected President, and Thomas A. Hendricks, of the State of Indiana, has been duly elected Vice-President, of the United States, agreeably to the Constitution, for the term of four years, beginning on the 4th day of March, 1885.

In witness whereof I have hereunto set my hand this —— day of February, 1885, and have sealed with the seal of the Senate.

And that the committee hereby appointed, when notifying the persons elected of their election to the offices of President and Vice-President of the United States, shall present to each of them a duly authenticated copy of the foregoing certificate.

This resolution came up for consideration in the Senate next day, February 12th, and was referred to the Committee on Privileges and Elections. It is clear, therefore, that the Forty-eighth Congress was determined, in the absence of continuous precedent, to let the simple declaration of the result of the electoral vote in the joint convention stand as decisive and conclusive.

Foreign Contract Labor.—Dec. 9, 1884, in the Senate, Mr. Blair, of New Hampshire, brought up the bill "to prohibit the importation and migration of foreigners and aliens under contract or agreement to perform labor in the United States, its Territories, and the District of Columbia." This measure originated in the House, where it was debated at great length during the first session of Congress, and finally passed without a call for the yeas and nays. It was taken up in the Senate and discussed during the same session, but was not put to a vote. During the second session the bill was fully debated in the Senate and every effort to change its character materially was defeated, though various verbal changes were made in the text. Feb. 18, 1885, it was passed, as follows:

Sec. 1. That from and after the passage of this act it shall be unlawful for any person, company, partnership, or corporation, in any manner whatsoever, to prepay the transportation or in any way assist or encourage the importation or migration of any alien or aliens, any foreigner or foreigners, into the United States, its Territories, or the District of Columbia, under contract or agreement, parol or special, express or implied, made previous to the importation or migration of such alien or aliens, foreigner or foreigners, to perform labor or service of any kind in the United States, its Territories, or the District of Columbia.

Sec. 2. That all contracts or agreements, express or implied, parol or special, which may hereafter be made by and between any person, company, partnership, or corporation, and any foreigner or foreigners, alien or aliens, to perform labor or service, or having reference to the performance of service or labor by any person, in the United States, its Territories, or the District of Columbia, previous to the migration or importation of the person or persons whose labor or service is contracted for into the United States, shall be utterly void and of no effect.

Sec. 3. That for every violation of any of the provisions of section 1 of this act the person, partnership, company, or corporation violating the same, by knowingly assisting, encouraging, or soliciting the migration or importation of any alien or aliens, foreigner or foreigners, into the United States, its Territories, or the District of Columbia, to perform labor or service of any kind under contract or agreement, express or implied, parol or special, with such alien or aliens, foreigner or foreigners, previous to becoming residents or citizens of the United States, shall forfeit and pay for every such offense the sum of $1,000, which may be sued for and recovered by the United States or any person who shall first bring his action therefor, including any such alien or foreigner who may be a party to any such contract or agreement, as debts of like amount are now recovered in the Circuit Courts of the United States, the proceeds to be paid into the Treasury of the United States; and separate suits may be brought for each alien or foreigner being a party to such contract or agreement aforesaid. And it shall be the duty of the district attorney of the proper district to prosecute every such suit at the expense of the United States.

Sec. 4. That the master of any vessel who shall knowingly bring within the United States on any such vessel, and land, or permit to be landed, from any foreign port or place, any alien laborer, mechanic, or artisan who, previous to embarkation on such vessel, had entered into contract or agreement, parol or special, expressed or implied, to perform labor or service in the United States, shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be punished by a fine of not less than $500 for each and every such alien laborer, mechanic, or artisan so brought as aforesaid, and may also be imprisoned for a term not exceeding six months.

Sec. 5. That nothing in this act shall be so construed as to prevent any citizen or subject of any foreign country temporarily residing in the United States, either in private or official capacity, from engaging, under contract or otherwise, persons not residents or citizens of the United States to act as private secretaries, servants, or domestics for such foreigner temporarily residing in the United States as aforesaid; nor shall this act be so construed as to prevent any person or persons, partnership, or corporation from engaging, under contract or agreement, skilled workmen in foreign countries to perform labor in the United States in or upon any new industry not at present established in the United States: *Provided*, That skilled labor for that purpose can not be otherwise obtained; nor shall the provisions of this act apply to professional actors, lecturers, or singers, nor to persons employed strictly as personal or domestic servants: *Provided*, That nothing in this act shall be construed as prohibiting any individual from assisting any member of his family or any relative to migrate from any foreign country to the United States.

Sec. 6. That all laws or parts of laws conflicting herewith be and the same are hereby repealed.

The argument against the bill was put by Mr. Hawley, of Connecticut, as follows:

"I am a believer in the most generous doctrines of immigration, in the most generous and liberal doctrines toward people of any part of the world who desire to come here. That is the existing law, or the old law. Blackstone cautions us in legislating to think of the old law, the mischief, and the remedy. Now, what is the mischief? Of the millions who come over here the great mass, with scarcely measurable exceptions, are people who come here to better their condition in every respect.

I do not pretend to say that the majority of them reason carefully as to the difference between governmental institutions, but they believe that here they can get better wages for their labor, live in better houses, be able to clothe and educate themselves and their children to better advantage, and therefore they come. They are the vast majority of the people who come here.

"What are the exceptions to this general fact? I will acknowledge that there are some evils. I will acknowledge that it is against the true policy of settlement here to encourage the coming of numbers of very ignorant laborers from abroad, an ignorant and a degraded class of laborers, who are willing to come here and engage themselves before they come to work at a very small price; but I think it has very seldom happened that they have not found out before they have been here long that they can get better wages. There have been very few who have come here so ignorant as not to discover that they could get a dollar and a half instead of a dollar and a quarter, and they are pretty apt to ask what their labor is worth after they have been here a short time.

"Should some of these laborers violate the contract that brought them to our shores, I do not see what remedy the employer is to have, for the laborer is not a slave. He can bring his action for a violation of the contract, and the damages he would get from an American court may be imagined. For example, a laborer came here under an agreement to work two years for fifty cents a day; what damages would court and jury be likely to give the employer who obtained judgment against a penniless and ignorant laborer for the violation of a contract made in a foreign country? Is it likely that men are employed for a long time in this country upon very low wages, wages that are a degradation to the laborers themselves or to the laborers around them?

"So I think the evil is exaggerated. But I am willing to acknowledge that there is an evil. It is a very discreditable and disgraceful thing, unjust to American citizens, that a body of men should be invited over here virtually to assume the condition of slaves or of peasants or peons; and if there were a way of correcting that, I should be glad to do it. Perhaps there is; perhaps this body will do it; but the bill is in contravention of natural right, and should be very carefully considered."

On the other hand, Mr. Blair stated the purpose of the bill as follows: "The bill is aimed at slavery rather than freedom. It is designed to prevent substantially the cooly practices which have been initiated and carried on to a considerable extent between America and Europe, and which we have undertaken to prohibit, not alone in the forum of general public sentiment, but in the legislation which both parties and the majorities in both branches of Congress have seen fit to enact.

"The bill does not aim to prohibit the natural flow of immigration from any other land to the United States. It leaves all natural laws, business laws, social laws, industrial laws to their natural effect and operation. But it does undertake to prohibit the efforts of corporations and of individuals, of capitalists, which have been put forth to some extent in this country to introduce into it the cheap and servile labor of foreign lands, and, when it is not necessary to do so for the good of the American people and the promotion of American industries, the skilled labor of other countries, because that labor, as we know, can be commanded at very greatly reduced wages as compared with what we pay to the working people of our own country.

"There have been repeated instances in all the great industries of this country where such importation has been made for the purpose of effecting a reduction of the natural rate of wages in this country such as our working people seem to be entitled to, such as are indispensable in order that they may participate by purchase (for we have nothing that we do not pay for with money in this world) in their due and just proportion of the benefits of civilization and of the principles of American liberty realized. It was in evidence before the committee of the House, and I was so informed personally by some of the leading representatives of the laboring element of the glass industry in this country, that the introduction of skilled glass workmen from the old countries by the practice which is prohibited by the bill —that is, by contracts made in advance for the services of skilled laborers abroad—had the effect to reduce at least 25 per cent. the previously existing rates and the natural rates of wages to those workmen who were engaged in that industry."

Mr. Ingalls, of Kansas, favored the measure as excluding dangerous elements: "Sir, the condition of society is serious and demands comment. The nations of the earth, under this doctrine of natural right—the right of every man on the face of the planet to come to the United States if he wants to—have been for a generation dumping their paupers, their dangerous and criminal classes, upon our shores under one pretext and another, until I am well-nigh persuaded, in view of recent demonstrations in New York, in Cincinnati, in Pittsburg, and Chicago, that the time has come to consider whether it may not be patriotic and prudent in some degree to modify existing views as to the significance of the Declaration of American Independence and the universal rights of man. I hazard nothing of veracity in saying that there are elements in this country at work now which will require, as I said the other day in debate upon another subject, the very active coalition of the conservative forces of our system if we desire to prevent organic changes in our form of government through destructive assaults upon our institutions, upon our accumulations, upon our industries, upon everything that by the grace of God under our civilization has made America what we are proud to claim it to be to-day.

"The recent violent demonstrations in various parts of this country forebode a perilous crisis, and unless measures are taken to protect the American people, to protect this great civilization that we have builded here by education, by religion, by the acknowledgment of the natural rights of man, within a brief space dangers as great as those that have overthrown monarchs and despots may with ruthless rage assail the institutions of republican freedom.

"The socialistic and agrarian demonstrations that are nightly made in our great cities must give us pause. War has been declared upon property. The declaration has been openly announced that property is robbery; and the open avowals of that class of men who have been admitted into this country under the specious application of the doctrine of the natural rights of man to go whither he will, irrespective of the purposes for which he migrates, leave little room to doubt that, in the event of another great financial crash or panic in this country, dangerous outbreaks may be expected in our great commercial centers. Already appeals are made to the unemployed, men who have come here under one pretext or another to better their condition, to commence their assaults upon what they are pleased to term the unjust accumulations of our manufacturers and merchants, to secure what is called in the language of these apostles of anarchy the forcible distribution of property, under the doctrine of the natural right of one man to have just as much as any other man has.

"I do not regard the bill as a perfect measure; it has some provisions to which I yield reluctant assent; I should be glad to see it modified; but it is a movement in the right direction. It calls the attention of the people to the most formidable danger that threatens us, and that is this ceaseless, endless incursion of elements that come not for the purpose of building up, of elevating, but for the purpose of overthrowing and destroying.

"Inasmuch as the object of the bill propounded by the Senator from New Hampshire is to exclude those men sought to be imported here under contract made in a foreign country for the purpose of laboring at less wages than those already employed can afford to accept, I shall vote for it with pleasure. We have for years past been declaring that the interests of American labor should be protected; and we are now to say whether the interests of the American laborer shall not be protected, not alone against the competition of the pauper and ill-paid labor of Europe, but against that most infamous free trade in labor itself which imports men here under a servile contract that is worse than the African slavery of the South, an ignoble and degrading competition—ignoble and degrading alike to those who make the contract and those who are subjected to its pernicious and destructive influences."

Mr. Platt, of Connecticut, argued that the prosperity of our institutions depends upon the prosperity of the working people, and asserted the necessity of preventing all schemes that make for the degradation of labor:

"A majority of the citizens of this republic are wage-workers. Possibly the statistics of the census do not quite bear me out in that statement. I think, although I have not the statistics at hand, that the number of those engaged in gainful occupations, as they are called, is stated at 47 per cent. of the entire population, but there are many other persons to be added to that list who do not come within the census classification. So I think I am correct in my statement that more than one half of the citizens of this republic are engaged to-day in earning wages.

"They are the majority of the voters of this land, laborers, men who earn their bread by the sweat of their brow. The most important problem presented to the American people to-day is what shall be the condition, what the character of that class of its citizens. Other governments based upon other principles, monarchical governments, arbitrary governments, governments of the strong hand, may live and prosper and thrive to a certain extent, although the character, the social, the mental, and the moral condition of its laboring classes may be neglected, and may not be deemed proper subjects for legislation. But in a republic I believe, and I state as the result of mature thought that it is impossible for the system of government long to survive unless there be passed such laws, unless there be adopted such policies as tend to elevate, to dignify, and to ennoble all its laboring classes. In this Government the working-man votes, and hungry men do not vote intelligently. Men who can only receive as the result of their toil just enough to keep from starvation and the poor-house, are not patriotic, or if they are will not long be patriotic to the extent of being willing to fight for and defend the institutions of their government.

"It becomes, then, the duty of all men who have to do with the legislation of the country to see, first of all, that such policies are adopted and such laws enacted as will tend to elevate the laboring citizens of the country. I said, therefore, that you must add to virtue and intelligence the prosperity of the citizen, if you expect the republic to endure; and prosperity of the citizen means fair, remunerative wages for his labor. The tendency in a country which seeks to lower the standard of wages below fair remuneration is wrong and vicious and destructive of republican institutions. We owe our marvelous growth in this country more to the character of the men who have worked with their hands from the foundation of the Government to this time than to any other one cause. It has been so heretofore in this Government that the man who would honestly work could receive fair compensation for his work, by which I mean enough so that he could do something more than keep himself alive and keep his family alive, and avoid the poor-house."

In the Senate the vote on the passage of the bill was as follows:

YEAS—Aldrich, Allison, Blair, Bowen, Brown, Call, Camden, Cameron of Wisconsin, Chace, Conger, Cullom, Dawes, Dolph, Fair, Frye, George, Gibson, Gorman, Hale, Harris, Harrison, Ingalls, Jackson, Jonas, Jones of Nevada, Kenna, Lamar, Lapham, McMillan, McPherson, Mahone, Miller of California, Miller of New York, Mitchell, Morrill, Palmer, Pike, Platt, Plumb, Pugh, Ransom, Sabin, Sawyer, Sewell, Sherman, Van Wyck, Vest, Voorhees, Walker, Wilson—50.

NAYS—Butler, Groome, Hampton, Hawley, Maxey, Morgan, Saulsbury, Vance, Williams—9.

ABSENT—Bayard, Beck, Cameron of Pennsylvania, Cockrell, Coke, Colquitt, Edmunds, Farley, Garland, Hill, Hoar, Jones of Florida, Logan, Manderson, Pendleton, Riddleberger, Slater—17.

February 23, the House concurred in the Senate's amendments, and March 2 the President approved of the measure.

Dynamite Explosion in London.—Jan. 24, on the receipt of news of the dynamite explosion in the British Parliament House, Mr. Bayard, of Delaware, offered the following resolution in the Senate:

Resolved, That the Senate of the United States has heard with indignation and profound sorrow of the attempt to destroy the Houses of Parliament and other public buildings in London, and hereby expresses its horror and detestation of such monstrous crimes against civilization.

Jan. 26, the resolution was amended by inserting the clause "and to imperil the lives of innocent and unsuspecting persons" after the word "London," and it was then passed as amended, Mr. Riddleberger, of Virginia, alone voting against it. In explanation of the resolution Mr. Bayard said: "Mr. President, I am better satisfied after the lapse of a day to ask now for the adoption by the Senate of the resolution offered by me at the close of the last legislative session, because this body has now the opportunity to affirm deliberately what spontaneously and instinctively prompted expression on the instant of information of the uncivilized, cruel, and barbarous attempt to destroy in another country human life, and with it public buildings dedicated to a government of laws, in the vain hope, possibly, to gain relief from suffering by thus overthrowing law itself in its very citadel, and at the cost of suffering and death to innocent persons."

Mr. Riddleberger, in opposition to the resolution said: "It is a resolution expressive of the indignation of the Senate of the United States at the blowing up of certain buildings in England, because forsooth it was destructive of buildings in which the laws of England are made which guarantee liberty to the subjects of Great Britain. That reason is not sufficient to induce me to vote for the resolution. We can not be expected to approve all the methods of the Irish people, but while we are preparing and experimenting with dynamite to blow vessels out of the water and to drown people in the ocean, it scarcely becomes us to say that a people who do not constitute a government and can not make a proclamation of war shall not use the same instruments of war that we would use under the same circumstances. Put any of us in a country where we could not own land, where we could not exercise the God-given right of owning a foot of land, even though we earned it by the sweat of our faces, and then see what kind of methods we would employ.

"I do not mean to justify the method, but I do mean to say that I shall not here vote for any resolution that may be distorted into an expression of sympathy, or even of common fellowship, with a country that knows nothing but tyranny, that practices nothing but cruelty in her wars, and gives none of her subjects the exercise of that liberty which we say on this side of the Atlantic belongs to every one. But a short time ago both houses of the United States Congress were somewhat disturbed by the rendering of a judicial opinion in England, then trying some Irishmen, in which the judge violated every principle of the common law (and about all I like England for is her common law), violated every principle of the Bill of Rights, of Magna Charta, of the Constitution of the United States, by determining a question of fact for the jury itself. Was there any expression of indignation here by the Senate then? None that I heard of; none that the country has heard of. If an English judge can sit upon the bench there, with an Irishman before him on trial for his life, and can say to the jury, 'These are the facts,' and that elicits no expression of indignation on the part of the law-making power of the United States, then I ask to be excused from expressing my sympathy in a matter such as we now have under consideration."

Jan. 26, Mr. Findlay, of Maryland, presented the following resolution in the House:

Resolved, That the Secretary of State report at as early a date as practicable to this house whether any citizens of the United States or persons domiciled or residing within the same were concerned or participated directly or indirectly in bringing about the recent explosions in London, provided the transmission of such information is compatible with the public service.

On the same day, Mr. Hewitt, of New York, presented the following resolution:

Resolved, That the Secretary of State be requested to inform this house, if it be not incompatible with the public interest, whether the department is in possession of any information tending to connect any person or persons resident in this country, and enjoying the protection of its laws, with attempts to destroy life and property within the dominion of any foreign power with which we have treaties of peace and amity; and to make such recommendations, by draft of bill or otherwise, as in his judgment may be desirable or necessary to be enacted into law for the punishment of such outrages.

Feb. 2, Mr. Belmont, of New York, presented the following resolution:

> *Resolved*, That the Secretary of State be requested to forthwith inform the House, provided such communication be not deemed incompatible with the public interest, whether or not any representations have been either formally or informally made to this Government by the British Government growing out of the use of dynamite in London. If such representations have been made in writing, then to transmit to the House complete copies of all communications that have passed between the two governments on the subject; but if the representations or communications have been verbal, then a statement of their tenor and purport.

These resolutions were all referred to the Committee on Foreign Affairs, which at the close of the session reported them back, with a recommendation that they lie on the table.

Mr. Dorsheimer, of New York, introduced Jan. 26 a bill "to prevent and punish crimes committed by means of explosive compounds," which was referred to the Committee on the Judiciary, and never came up for consideration in the House.

Davis and Sherman.—Jan. 8, in the Senate, Mr. Hawley, of Connecticut, presented the following resolution:

> *Resolved*, That the President of the United States be and he is hereby requested, if in his opinion it be not incompatible with the public interest, to communicate to the Senate a historical statement concerning the public policy of the Executive Department of the Confederate States, during the late war of the rebellion, reported to have been lately filed in the War Department by General William T. Sherman.

The subject was debated Jan. 12 and 13. The grounds of opposition to the adoption of the resolution were stated by Mr. Vest, of Missouri, among others:

"I very much regret the introduction of this resolution, not that as an ex-Confederate I have the slightest objection to the largest amount of publicity to the political history of the late Confederate States, but I regret it for the reason that it places the Senate of the United States in the attitude of becoming indirectly at least a party to a personal controversy in the public papers of the country. The Senate of the United States has over and over again refused to make investigation even when a member of this body rose and called attention to libels upon him in the public press; but the rule of the Senate has been, and I presume it will be adhered to in the future, to remand any Senator who has complaint of this sort to the remedies furnished by the laws of the country, and by an appeal to public opinion through the same medium of communication by which the libel was inflicted.

"My feeling toward General Sherman is personally of the kindest description. He is my constituent and I believe my personal friend; I have every reason to think so; but it is simple justice (and justice to a man of whom there may be great diversity of opinion, but who is still entitled to a fair and honest trial before this or any other tribunal) to say that the passage of this resolution commits the Senate of the United States, indirectly at least, to the side of this personal controversy, which belongs to General Sherman and his friends.

"Without going into the history of this matter, I state, what is known to the whole country, that in October last, at a meeting of Frank P. Blair Post, No. 1, of the Grand Army of the Republic, in the city of St. Louis, General Sherman stated that the late war, or the last war, originated in a systematic conspiracy, and that he had seen a letter, he is reported to have said, from Mr. Davis to a gentleman once the Governor of a Confederate State and now a member of this body, which stated that Jefferson Davis as President of the late Confederacy had threatened to coerce any one of the Southern States which attempted to secede from the Confederacy, thereby giving the lie to his expression of belief in State rights, and falsifying the very issue upon which the Southern States had gone into the war.

"This statement was published and widespread through the newspapers of the country. Mr. Davis responded by stating that no such letter had ever existed, and that he challenged its production, and in the absence of that letter he pronounced it a deliberate slander. The issue was made up, and General Sherman publicly avowed to all persons who approached him that he proposed to make his answer to Mr. Davis through the War Department at Washington. That answer has been made. It has been made in the shape of a letter not to a member of this body and late the Governor of a Confederate State, but a letter from Alexander H, Stephens, Vice-President of the Confederacy, to Herschel V. Johnson, in which he expressed his distrust and suspicion of Mr. Davis and his ultimate designs in the war. Another one of these documents is a message sent by Jefferson Davis to the Confederate Congress, or to the Confederate Senate in secret session, in which he recommended the suspension of the writ of *habeas corpus*. Both these documents have been published in the public press; they are found in the New York papers of yesterday, and the letter of Mr. Stephens to Mr. Johnson is also found in the Washington city papers of to-day.

"Is it fair, is it right, is it manly now, when Mr. Davis can not be heard upon this floor unless it be through the mouth of some one who chooses to espouse and advocate his side of this controversy—is it right now to use the Government of the United States and its instrumentalities in a personal controversy, no matter what may be its merits, no matter what may be the position of the parties to it?

"Sir, there can come no good from this investigation. Its only result will be—I charge it not as the object—to arouse the bitter memories of the war. It will add nothing to the political history of the Confederate States. Jefferson Davis to-day is an old man, broken in fortune and in health, and living among the people who honor and love him. If the resolution be passed it will necessitate, upon my part at least, the public avowal (I was a member of the Confederate States Senate) that I opposed with all my force measures which were advocated by Mr. Davis, and which I thought were not for the public welfare of the Confederacy, and it will necessitate the avowal also that I believe, as an overwhelming majority of the Southern people who risked and lost all in that terrible struggle to-day believe, and will always believe, that Jefferson Davis was as true and loyal to the cause which he espoused as ever was wife to husband, as ever was religious votary to the God he worshiped. He made mistakes unquestionably, and who would not? Met and surrounded by unparalleled difficulties and dangers, arrayed against him the highest talent of the Confederate States in the persons of political leaders, who would not have been mistaken in the terrible ordeal through which he passed? But I should hold myself to be recreant and dastard, false to the memories of the past, all that is left to us, false to my hopes in the future as an honorable man, if I did not state here and now that General Sherman is mistaken in the assertion that the people of the Confederate States did not sympathize with their leader in that terrible conflict. I say nothing of its merits, I say nothing of its history, I simply make an avowal here in behalf of an absent man, who has suffered much, whatever may be thought of his past history, and who is entitled to this avowal from one who shares with him to-day the responsibility of that struggle and its results."

In support of the resolution, Mr. Sherman, of Ohio, said:

"Mr. President, I should not have said a word about this matter, being restrained by a sense of personal delicacy on account of my relation with one of the gentlemen named in the resolution, but for the fact that Senators on the other side of the house seem to regard this as a mere personal controversy between two citizens. I know it will be very much a matter of surprise to Gen. Sherman to learn that this is a controversy between himself and Jefferson Davis. He says in the correspondence that he does not know Jefferson Davis; he did not see him when he was Secretary of War, he was then not in the army, and he never has had any personal relations with him whatever. Therefore, there was no controversy of a personal character between them. On the other hand, Gen. Sherman, a citizen of St. Louis, attends by invitation the Frank Blair Grand Army post, composed of soldiers, their wives and families. In the course of that meeting, entirely *impromptu*, without any preparation, he is called upon in pursuance of their customs to make a speech, and he does so—a brief speech, the contents of which were substantially stated in the public prints in St. Louis.

"The allegations contained in that speech, as published in the papers and as mentioned in the statement by Gen. Sherman now in the War Department, are that he regarded Jefferson Davis not only as a rebel but as a conspirator, and that he saw not only letters but papers captured during the war, and especially while he was marching in his well-known march through Georgia, which tended to show that Jefferson Davis while the war was progressing had abandoned his State-rights doctrines and had become practically a dictator in the South. That was in substance the statement made by Gen. Sherman without the slightest personal reference to Jefferson Davis as a man, but only referring to him as the leader of the great army and the great cause which these soldiers had endeavored to overthrow by superior force. That was the statement. As to any personal controversy between these two persons, there was nothing of the kind evinced, except Gen. Sherman did insist that he had the historical right to class Jefferson Davis as a conspirator and a traitor. Did that make a personal quarrel between Jefferson Davis and W. T. Sherman? Far from it. I might in the same way make a personal quarrel with all the descendants of Benedict Arnold by stating the historical fact about him.

"What followed? Mr. Davis, seeing this, and becoming angered by it, writes a very bitter article, not to Gen. Sherman, but to some newspaper in which he saw the publication, in which he said substantially Gen. Sherman makes a false statement—stronger language even, substantially that Gen. Sherman lied; gives him the lie. This was not addressed to Gen. Sherman. Gen. Sherman, who had the honor to command the Army of the United States, and had been, to say the least, a conspicuous actor in the great military events of the war, and who was still in every sense an officer of the army subject to the orders of the President of the United States at any time, who may be court-martialed and subjected to the laws of war, did not respond by a letter to Jefferson Davis, or by sending his views to a public print and thus getting into a newspaper wrangle. He did exactly the opposite of that. As an officer of the army he gave to his military superior the reasons and evidence, which justified every observation that he had made, and deposited this in the public records, as he was bound to do.

"If an officer of the army of the United States, whether retired or not, has put upon him any insult whatever, which among gentlemen would be regarded as a matter of reproach, he is bound in honor and by his military rank to make an explanation to the proper authorities to show that the imputation upon his honor is not correct, and that he only did what he was justified in doing in speaking of a historical character. That is what General Sherman did. That is the letter that he sent, after careful preparation, to the department. I have read that letter. There is not a word of personal unkindness to Jefferson Davis or to mortal man in it, but there are statements there and letters of a striking character, which in my judgment ought to be published, so that they may become a part, not of the newspaper literature of the day, but of the public records. The first is—and I think it is the first time I ever saw it, though it may have been published before—he produces resolutions adopted by a meeting of Democratic Senators and members from the Southern States who were about to participate in the rebellion, in which they resolved that they would organize a separate government, called the Confederate Government, at Montgomery, Ala., and fixed the day, the same day that was subsequently adopted.

"They also resolved that a committee of three persons, consisting of Jefferson Davis and Mr. Slidell and Mr. Mallory, should be appointed to carry into execution the resolutions adopted, and that a portion of them should remain in Congress so as by their votes to prevent Congress from taking measures to defeat or delay their operations in the South. If that is not a conspiracy, in the name of God what is? Think of it! That members of this body should conspire together when under the same oath and sanction that all of us are under, should go to a private chamber and there with others resolve that they will not only break up this Government of ours but actually prevent the Government from arming itself and defending its life! That is a conspiracy. If that is not a conspiracy, God knows what is.

"That justified General Sherman in one of the remarks that he made. The other was that a certain letter he had seen himself from Jefferson Davis to a gentleman since a member of the Senate of the United States tended to show that Jefferson Davis had changed his opinions in 1864; that instead of being a State-rights Democrat, he was practically intending to subvert even the government that had been established in the Southern States.

"Gen. Sherman insists that he did see such a letter, states the circumstances when and where, and that this paper either came to Washington into the general collection here, where it is in the mass of unassorted documents difficult to find, or else it went to Gen. Sherman's headquarters and thence to the headquarters of Gen. Sheridan, where it was destroyed by the great Chicago fire, but that he did see it and remembers its contents. To show that the opinions avowed in the letter were entertained and acted upon by Jefferson Davis, he produces a letter from Alexander H. Stephens, then an associate with Jefferson Davis in the government of the rebel confederacy, in which Mr. Stephens says of Jefferson Davis that he has abandoned his State-rights doctrine, that he was then in his opinion seeking to subvert the very government that had been established by the Confederate States. That letter has been recently published. It has never gone into the public archives until presented on this occasion. It is a very interesting letter, which was captured in the hands of the person to whom it was addressed, a person scarcely less distinguished than Mr. Stephens—Herschel V. Johnson.

"That letter was captured at the house of Johnson. I have seen the original of that letter. I know Mr. Stephens's handwriting both before the war and since. I know that it is his handwriting, and it will not be disputed by any one. In that Mr. Stephens justifies every word that was said by Gen. Sherman in respect to the change of mind in Jefferson Davis in the condition of affairs as they existed in 1864.

"That is not all. He produces a message of Jefferson Davis himself, dated in January, 1864, addressed to the Confederate Congress, marked 'secret,' and kept in the rebel archives, and found there by an officer of the United States Army when Richmond was taken by the United States troops. In this official message, which has never heretofore been published, Jefferson Davis says that the movements in the South, but especially in North Carolina, would tend to subvert the Confederate Government and must be resisted by every means possible, and demands the suspension of the *habeas corpus*. The indorsements on the back of that paper show that in the Confederate Congress such a bill was introduced, and was reported by a committee to that Congress. Whether the bill passed or not is not known, unless it is shown by the Confederate records; but it is probably not shown by these records, because it was a secret document. That original document is now in the hands of an officer of the army, with the name of Jefferson Davis in his own handwriting—I am not familiar with it at all, I can not recognize it, but it is said to be so, and it has all the ear-marks of an official document precisely such as the documents we have here shown.

"Now, Mr. President, the question is at this time, twenty years after the war is over, when these documents are first presented to the public, when they are filed in the War Department, whether it is beyond a reasonable rule for the Senate of the United States to call for their publication. Publications in the newspapers scatter and disappear. This paper is filed in the war records, but it may not be printed in the war records, it may be excluded for a technical reason. Why should we not print it, why should there be a single objection to it?"

January 13, the resolution was adopted by the following vote:

YEAS—Aldrich, Allison, Bayard, Beck, Blair, Bowen, Camden, Cameron of Wisconsin, Cockrell, Coke, Conger, Cullen, Dawes, Dolph, Fair, Fry, Garland, Gibson, Gorman, Hale, Harrison, Hawley, Hoar, Ingalls, Jackson, Jonas, Jones of Florida, Lamar, Lapham, McMillan, McPherson, Manderson, Miller of California, Mitchell, Morrill, Palmer, Pendleton, Pike, Platt, Plumb, Pugh, Sabin, Sawyer, Sewell, Sheffield, Sherman, Vance, Van Wyck, Voorhees, Walker, Williams, Wilson—52.

Nays—Brown, Colquitt, Hampton, Harris, Kenna, Maxey, Morgan, Saulsbury, Slater, Vest—10.

Absent—Butler, Call, Cameron of Pennsylvania, Edmunds, Farley, George, Groome, Hill, Jones of Nevada, Logan, Mahone, Miller of New York, Ransom, Riddleberger—14.

Reciprocity Treaties.—The passages in the President's message suggesting a policy of commercial reciprocity with various neighboring nations, the submission of proposed reciprocity treaties with Spain, Nicaragua, and Mexico, and the negotiation of one with the Dominican Republic, all called public attention to the fact that it lies within the power of the President and the Senate, in executive session, to make a series of treaties which may revolutionize the whole revenue system of the country without the knowledge or consent of the House of Representatives. Dec. 8, 1884, a joint resolution, proposing to amend the Constitution by requiring the consent of the House to the ratification of treaties, was introduced in that body, and Dec. 19, a second joint resolution for the same purpose, but only affecting reciprocity treaties, was introduced. Nothing came of either resolution. In the Senate, Mr. Van Wyck, of Nebraska, introduced the following resolution December 11:

> Whereas a commercial treaty of great importance has been negotiated between the United States and Spain, which was made public by the King of Spain to such extent that it was cabled from Madrid by the "Times" of New York city, and given to the American people by that journal before the same was presented with becoming solemnity and secrecy to the Senate:
>
> Whereas the provisions of said treaty materially affect the subject of revenues and taxation, involving no serious questions of diplomacy and state secrets, the discussions thereof should be in open session, so that the people may be fully apprised of the reasons why said treaty should be ratified or rejected: Therefore,
>
> *Resolved*, That the Committee on Rules be directed to report an amendment or additional rule requiring that treaties which concern matters of revenue shall be considered in open session.

December 15, Mr. Morrill, of Vermont, submitted the following resolution on the subject:

> Whereas the Legislature is the department of Government by which commerce should be regulated and laws of revenue passed; the Constitution in terms communicates the power to regulate commerce and to impose duties to that department. It communicates it in terms to no other. The representatives of the people, sitting in their legislative capacity, with open doors, under the eye of the country, communicating freely with their constituents, may exercise this power more intelligently, more discreetly, may acquire more accurate and more minute information concerning the employment and interests on which this description of measures will press, and may better discern what true policy prescribes or rejects than is within the competence of the executive department of the Government: Therefore,
>
> *Resolved*, That the so-called reciprocity treaties, having no possible basis of reciprocity with nations of inferior population and wealth, involving the surrender of enormously unequal sums of revenue, involving the surrender of immensely larger volumes of home trade than are offered to us in return, and involving constitutional questions of the gravest character, are untimely, and should everywhere be regarded with disfavor.

January 7, 1885, Mr. Morrill called up his resolution, and made an elaborate argument in support of it. He said:

"When the question of a reciprocity treaty was first presented to the Senate forty years ago, it was unanimously decided that it would be a grave and dangerous invasion of the prerogative of Congress to regulate commerce with foreign nations, as well as of the prerogative of the House of Representatives, as to its exclusive power to originate revenue bills. The record shows (and it was long since made public) that two reports on the Zollverein treaty, with Prussia and other members of the Germanic Confederation, were made at different times by the Senate Committee on Foreign Relations, both reaching the same adverse conclusion—one by Mr. Choate, of Massachusetts, when the treaty was laid upon the table, as the least offensive mode of rejection; and one later, by Mr. Archer, of Virginia, when, at the request of the President for further consideration, the treaty was squarely and unanimously rejected, including even the vote of John C. Calhoun, although, while Secretary of State, the treaty had received his perfunctory support. That the standing of Mr. Choate as a lawyer of profound learning, and the sound judgment of Mr. Archer, the long-trusted congressional leader on foreign affairs, peculiarly qualified them to handle the subject, not only justly, but with pre-eminent ability, will not be controverted even by the present distinguished Committee on Foreign Relations. Notwithstanding it was broadly claimed by Mr. Archer that the treaty would have promoted our interests, it was resolutely refused, and solely on the ground of paramount constitutional objections. This adverse determination was again and finally confirmed in 1848 by a record of the yeas and nays, with every member, both of the Democratic and Whig parties then present, in the negative, and at a time when among the members of the Senate were to be found, besides many others of national renown, such celebrities as Calhoun, Crittenden, Berrien, Badger, Corwin, Dix, Hamlin, Mangum, Bell, Davis of Mississippi, 'Honest John Davis' of Massachusetts, Mason of Virginia, and Johnson of Maryland. We may well feel proud even to be members of a body which has been decorated with names wearing such enduring national luster. I think the Senate would willingly be refreshed with at least a single paragraph from one of these adverse reports, from which it will be seen that my resolution has been taken, and I will therefore read the following from that of June 14, 1844:

> In the judgment of the committee, the Legislature is the department of Government by which commerce should be regulated and laws of revenue passed. The Constitution in terms communicates the power to regulate commerce and to impose duties to that department. It communicates it in terms to no other. Without engaging at all in an examination of the extent, limits, and objects of the power to make treaties, the

> committee believe that the general rule of our system is, indisputably, that the control of trade and the function of taxing belong, without abridgment or participation, to Congress.
>
> They infer this from the language of the Constitution, from the nature and principles of our Government, from the theory of republican liberty itself, from the unvaried practice, evidencing the universal belief of all, in all periods, and of all parties and opinions. They think, too, that, as the general rule, the representatives of the people, sitting in their legislative capacity, with open doors, under the eye of the country, communicating freely with their constituents, may exercise this power more intelligently, more discreetly, may acquire more accurate and more minute information concerning the employments and the interests on which this description of measures will press, and may better discern what true policy prescribes or rejects, than is within the competence of the executive department of the Government.

"Mr. President, this was the well-considered and determinate argument accepted by a united Senate, solemnly bound as we are by an oath, and though floods of eloquence may come, and the winds of rhetoric beat against it, it will stand, for it is founded on the bed-rock of the Constitution. Its high and thorough seriousness, Senators will find, can not be dismissed with the sneer of silence, nor can its cogency be checkmated even by an imposing front of numbers. Antagonism to the constitutional position then announced by the Senate will not win future colossal reputations.

"I regret not to find myself in accord with some of the ablest constitutional lawyers of the Senate at the present time; but, as humble as I feel myself to be, I am not ashamed to appeal from the new to the old Senate, and to remain an adherent to the constitutional doctrine asserted and promulgated by some of the most illustrious names that have adorned the history of the American Senate. One of the present distinguished Senators from Massachusetts—with whom on this question it is my misfortune to differ—has told me that 'the great expounder of the Constitution,' a grander name than even that Africa gave to Scipio, was once reported to have said, 'I hope I know the Constitution of my country better than to think a reciprocity treaty is constitutional.' If reciprocity treaties were unconstitutional when this declaration was made by Mr. Webster, they are surely none the less so now, and my friend the learned Senator from Massachusetts may find, even in the wayside opinions of his distinguished predecessor, 'the bones of a giant.'

"The powers separately and specially granted by the Constitution to one branch of our Government can not be assumed or held in common by any other branch at its pleasure. The invasion of the jurisdiction of one by another can not be accounted less than rank usurpation. Any other interpretation of the Constitution would be derogatory not only to the Constitution itself, but to its far-sighted framers. The President is the Commander-in-Chief of the Army and Navy, but this gives him no authority to invade the power of Congress 'to raise money to support the army and navy.' The President, with the concurrence of two thirds of the Senate, may make treaties, but under cover of this authority no constitutional treaty can be made 'to regulate commerce with foreign nations,' or to initiate 'revenue bills,' any more than to establish a 'uniform law of bankruptcy' or 'of naturalization'; and these, together with all other powers which were specially confided to Congress or to the House of Representatives by the Constitution, stand as a flaming sword against all encroachments of the Executive, and forever limit and exclude the reach of its treaty-making power.

"The House of Representatives has ever been open-eyed as to the least apparent senatorial usurpation of the power to originate revenue bills, and the Senate in all controversies on this point has promptly yielded to the claims of the House. This exclusive power of the House is consecrated in all of our earliest traditions, and will ultimately be found impregnable, whether threatened by the Senate alone or with the aid of the auxiliary forces of the Executive.

"I know that the constitutional barrier is assumed to be avoided, if a profane illustration may be pardoned, by whipping his Sooty Majesty around the stump, or by obtaining the subsequent consent of Congress, or of the House of Representatives, to the stipulated requirements of the treaty; but this consent subjects Congress and the House to a state of suspended animation, and is only a flimsy subterfuge, by which the full power of Congress, or of the House of Representatives, for a term of years, is to be curtailed and abridged. In the first place, the Constitution does not contemplate the action of the House at all upon treaties. All legitimate treaties must be made by the Executive, with the concurrence of two thirds of the Senate, and, when so made, no action of the House can amend or change them or defeat them by a legislative veto. But, in the examples of hybrid treaties now officially made known to the public, the vital part of each treaty is to be carried into effect, not by the concurrence of two thirds of the Senate, but by a bare majority of each house. The rule of majorities is to prevail in contravention to fundamental law. In the second place, the action of the House, or even of Congress, in 1885, can not impair, abridge, or take away the legislative authority of the next or of any succeeding Congress 'to regulate commerce,' nor of the House of Representatives 'to originate revenue bills.' Nor can this legislative authority be abdicated even by making the Executive the heir-apparent. No act of the executive branch of the Government or of Congress can suspend, repeal, or blot out plain provisions of the Constitution. If such provisions could be suspended and renounced for six years by a temporary majority of Congress or of the House of Representatives, they could of course be suspended or renounced for twenty years or a hundred. It appears to me, therefore, that any treaty which encroaches upon the power to regulate commerce or upon that to originate revenue bills involves a plain, open, and palpable violation of the Constitution.

"It is an insidious method by which the vastly important power of the House of Representatives over all revenue bills may, with an ambitious Executive, become obsolete and utterly valueless. The whole field of regulating trade and commerce by a tariff on imports may thus be opened to secret invasion, patch by patch, and twenty treaties may as properly be concocted as one, leaving only tattered remnants of tariff laws to be dealt with by Congress. A reciprocity treaty necessarily abandons protection by any tariff upon all the articles enumerated, and equally abandons all revenue and power to obtain revenue therefrom during the existence of the treaty. It is a measure clearly as inconsistent with the idea of 'revenue only' as with that of 'protection.' It is hodge-podge free trade with special favorites only, and invidious restriction against all others."

In opposition to these views, Mr. Lapham, of New York, said:

"To us at home treaties have the force of laws next in importance to the Constitution. With the nations negotiating them they are contracts only, but contracts of the highest character, and imposing the most solemn obligations. The language of the Constitution in regard to their effect and operation is deserving of notice. It is in these words:

> This Constitution and the laws of the United States which shall be made in pursuance thereof, and all treaties made or which shall be made under the authority of the United States, shall be the supreme law of the land.

"Whether the variance in describing laws and treaties was made to cover existing treaties, as some authors have stated, the fact remains that it is laws made in 'pursuance of the Constitution,' and treaties 'made under the authority of the United States,' that become the supreme law.

"In the light of these general principles I desire to call attention to some of the questions which may arise in the exercise of the treaty-making power as thus provided in the Constitution. By the eighth section of Article I it is provided that Congress shall have power to pay debts and provide for the general welfare, etc. Can there be any doubt that a treaty may deal with these subjects?

"Congress has also power to regulate commerce with foreign nations and with the Indian tribes. Can there be any doubt about the exercise of the treaty-making power on these subjects? Many of our treaties with foreign powers contain regulations as to commerce, and our most important dealings with the Indian tribes have been by treaties.

"By the same article Congress has power to establish post-roads, and yet by treaty we have postal conventions with many nations, and could not have obtained them in any other way. Congress has the power to give to authors and inventors the exclusive right to their discoveries; yet we have treaties on the subject of trade-marks with most of the nations with whom we have other treaty relations. Congress has power to declare war, but before a gun is fired or any other hostile act performed the treaty-making power may intervene and stop the contest without bloodshed by a treaty of peace.

"Congress has power to dispose of and make all needful rules and regulations respecting the Territories of the United States. But the treaty-making power may be exercised on the subject, and territory be alienated or acquired, as the best interests of the country may demand. Congress has power to establish a uniform rule of naturalization; still, foreigners resident in the Territories, when acquired, have been declared to be clothed with the rights of citizens. In Alaska the treaty for its cession admitted foreigners to all such rights.

"When we recall the fact that 'all treaties made, or which shall be made, under the authority of the United States' override all State laws and acts of Congress, it would seem that the treaty-making power is not so restricted and circumscribed as the authors of the construction under consideration claim. They assert that the entire field of laying duties belongs to Congress, and that whenever the treaty-making power makes a free list it usurps a function that does not belong to it. Suppose we should desire to open new commercial relations with a foreign power, or should deem it advantageous to establish a more free and extended intercourse with such power, and to that end it should become necessary to provide for the introduction of our products for a limited time and of a specific character into the dominions of such power, with the admission of its products as an equivalent therefor; Congress could not do that. The treaty-making power can alone accomplish the result.

"Mr. President, another and conclusive answer to the objection to such treaties is the stipulation contained in them that they shall not be operative until Congress shall have enacted the legislation necessary to carry them into effect. There is a statement in the President's message as follows:

> All treaties in the line of this policy which have been negotiated or are in process of negotiation contain a provision deemed to be requisite under the clause of the Constitution limiting to the House of Representatives the authority to originate bills for raising revenue.

"There has hitherto been no difficulty in providing the necessary legislation of Congress.

"A treaty negotiated and ratified without containing this provision would become the supreme law, and Congress would be as much bound to provide for its execution as for the execution of the laws of its own enacting. The omission to do so would be a *casus belli*, and subject us to national dishonor and disgrace.

"It is a solecism to say that a treaty is unconstitutional when the constitutional power to make it is without any limit, and it vests entirely in the exercise of the discretion of the President and the Senate."

The discussion of the subject, though full of interest, was pushed no farther.

Unlawful Occupancy of Public Lands.—Feb. 9, 1885, in the Senate, Mr. Van Wyck, of Nebraska, reported from the Committee on Public Lands, with amendments, the House bill for the prevention of unlawful occupancy of public lands, known as the fencing bill. The following is the measure as reported:

SECTION 1. That all inclosures of any public lands in any State or Territory of the United States heretofore or to be hereafter made, erected, or constructed, by any person, party, association, or corporation, to any of which land included within the inclosure the person, party, association, or corporation making or controlling the inclosure had no claim or color of title made or acquired in good faith, or an asserted right thereto by or under claim made in good faith at the proper land-office, under the general laws of the United States at the time any such inclosure was or shall be made, are hereby declared to be unlawful, and the maintenance, erection, construction, or control of any such inclosure is hereby forbidden and prohibited: and the assertion of a right to the exclusive use and occupancy of any part of the public lands of the United States in any State or any of the Territories of the United States, without claim, color of title, or asserted right as above specified as to inclosure, is likewise declared unlawful, and hereby prohibited.

SEC. 2. That it shall be the duty of the district attorney of the United States for the proper district, on affidavit filed with him by any citizen of the United States that section 1 of this act is being violated, showing a description of the land inclosed with reasonable certainty, not necessarily by metes and bounds nor by governmental subdivisions of surveyed lands, but only so that the inclosure may be identified, and the persons guilty of the violation, as nearly as may be, and by description if the name can not on reasonable inquiry be ascertained, to institute a civil suit in the proper United States District or Circuit Court, in the name of the United States and against the parties named or described who shall be in charge of or controlling the inclosure complained of as defendants; and jurisdiction is also hereby conferred on any United States District or Circuit Court having jurisdiction over the locality where the land inclosed, or any part thereof, shall be situated, to hear and determine proceedings in equity, by writ of injunction, to restrain violations of the provisions of this act; and it shall be sufficient to give the court jurisdiction if service of original process be had in any civil proceeding on any agent or employé having charge or control of the inclosure; and any suit brought under the provisions of this section shall have precedence for hearing and trial over other cases on the civil docket of the court, and shall be tried and determined at the earliest practicable day. In any case, if the inclosure shall be found to be unlawful, the court shall make the proper order, judgment, or decree for the destruction of the inclosure in a summary way, unless the inclosure shall be removed by the defendant within five days after the order of the court.

SEC. 3. That no person, by force, threats, intimidation, or by any fencing or inclosing, or any other unlawful means, shall prevent or obstruct or shall combine and confederate with others to prevent or obstruct any person from peaceably entering upon or establishing a settlement or residence on any tract of public land subject to settlement or entry under the public-land laws of the United States, or shall prevent or obstruct free passage or transit over or through the public lands: *Provided*, This section shall not apply to persons who have gone upon, improved, or occupied said lands under the land laws of the United States, claiming title thereto in good faith.

SEC. 4. That any person violating any of the provisions hereof, whether as owner, part owner, or agent, or who shall aid, abet, counsel, advise, or assist in any violation hereof, shall be deemed guilty of a misdemeanor, and fined in a sum not exceeding $1,000, and be imprisoned not exceeding one year for each offense.

SEC. 5. That the President is hereby authorized to take such measures as shall be necessary to remove and destroy any unlawful inclosure of any of said lands, and to employ civil or military force, as may be necessary for that purpose.

In a report accompanying the bill, the committee said:

The necessity of additional legislation to protect the public domain because of illegal fencing is becoming every day more apparent. Without the least authority, and in open and bold defiance of the rights of the Government, large, and oftentimes foreign, corporations deliberately inclose by fences areas of hundreds of thousands of acres, closing the avenues of travel and preventing the occupancy by those seeking homes. While those fencing allege the lands within such inclosures are open to settlement, yet no humble settler, with scarcely the means for the necessaries of life, would presume to enter any such inclosure to seek a home. The Government has sufficient authority to drive those seeking homes from the Indian Territory, and to burn the ranches of those invading the Yellowstone Park, while those appropriating vast areas are hoping the only remedy to be used against them will be the law's delay in the courts. Therefore your committee have added a new section to the Army bill, authorizing the President of the United States to summarily remove all obstructions, and, if necessary, to use the military power of the United States.

Feb. 10, section 1 was amended by inserting after the words "good faith" the words "with a view to entry thereof"; section 2 was amended by inserting after the word "court" the words "or Territorial District Court"; the proviso of section 3 was amended by striking out the words "apply to" and inserting the words "be held to affect the right or title of." The bill then passed the Senate. In the House, Feb. 12, the Senate amendments were concurred in; and Feb. 25 the bill was approved by the President.

Chinese Indemnity Fund.—In the House, Jan. 14, 1885, Mr. Wait, of Connecticut, reported from the Committee on Foreign Affairs a bill for the return of what is known as the Chinese indemnity fund, which was passed as follows:

Be it enacted, etc., That the President be and he is hereby authorized and directed to cause the residue of the indemnity received from China, which is now in the custody of the Secretary of State, and is known and designated in the accounts and reports of the Department of State as the Chinese indemnity fund, to be converted into coin, and the sum of $583,400.90 be returned to the Chinese Government, and the balance of said fund, if any, be covered into the Treasury of the United States:

Provided, That before the payment to China, the Secretary of State shall pay from said fund to the executors of Charles E. Hill the sum of $130,000, upon receipt of a release in full for all claims upon China for the use and loss of the steamer Kenjeor, in or about the year 1863.

Mr. Wait said, in explanation of the measure: "The bill now under consideration provides for the return, to the Government of China, of certain funds, now in the hands of the Secretary of State, known as the 'Chinese indemnity fund.'

"In order that the House may fully understand the reasons which influenced the Committee on Foreign Affairs to report the bill with a favorable recommendation, I will, as briefly as possible, review the circumstances under which this money came into the custody of the United States. Under the privileges granted by the treaty of 1844, between the United States and China, known as the 'Treaty of Wanghia,' a large number of American citizens took up their residences in China, and engaged in various pursuits.

"The opening of the empire to foreigners, under the provisions of the various treaties with foreign countries, created a very hostile feeling among a large class of the Chinese people.

"Between the years 1844 and 1858 numerous losses were sustained by American residents of China by reason of the destruction of their property through the acts of lawless bands of Chinese; the greatest number and the heaviest losses occurring after the year 1850, when the powerful revolt known as the Taeping rebellion broke out, which continued to render the power of the central Government nugatory in a large section of the country for a number of years.

"In 1858 these losses were scheduled by the United States minister in China, and a demand was made by him upon the Chinese Government for their payment. After some delay, and a reduction of the amount demanded to 500,000 taels ($735,258.97), a treaty was concluded between the two governments providing for the payment of this sum from the customs receipts at the three principal open ports of the Chinese Empire.

"Under the provisions of an act of Congress two commissioners, Messrs. Charles W. Bradley, United States consul at Ningpo, and O. E. Roberts, United States vice-consul at Hong-Kong, were appointed to adjust the claims and award such sums as might be found to be justly due; their decisions to be final.

"The commissioners appointed were both at the time residents of China, and familiar with all the circumstances under which the claims arose.

"They met at Macao, in China, Nov. 18, 1859, and concluded their labors on the 13th day of January, 1860.

"Upon examination, all the claims were found to be more or less exaggerated, and some to be entirely groundless; while others were presented by persons not citizens of the United States.

"After paying all the claims, to the apparent satisfaction of the claimants—no protest being filed in any case—with interest for five years at the rate of 12 per cent. per annum, there remained a surplus of more than one third of the gross sum received from China.

"As the money was paid upon the representations of the United States Government that it was required to cover losses arising from the destruction of private property of Americans resident in China which occurred prior to 1858, and as the terms of the treaty expressly specified that it was to be applied to that purpose, it followed as a matter of right and justice that the surplus should have been returned to China as soon as its amount had been ascertained. This course was recommended by President Buchanan, and has been repeatedly urged by every succeeding Executive, including President Arthur, yet no conclusive action has been taken by Congress to carry these recommendations into effect.

"In consequence of this inaction on the part of Congress, the Secretary of State was constrained to direct the money to be sent to the United States for safe-keeping, and it was deposited in the vaults of the State Department.

"In the exigency of the stringent money market during the civil war, the money was used by the United States Government, and bonds of the Government were deposited with the Secretary of State to represent it.

"The facts, as here outlined, clearly show that this 'fund,' which is still in the custody of the Secretary of State in the form of United States bonds, should be returned to the Chinese Government without further delay.

"The fund having always been regarded and treated as the property of China—as it manifestly is—any increase in the nature of earnings which may have accrued during the pendency of its return attaches to the principal under the clearest construction of law and the simplest rules of justice and equity.

"The sum received from China under the provisions of the treaty was $735.238.97. After paying all the claims, there remained $239,165.77 in gold, which, when transferred to the United States and deposited in the State Department, yielded the sum of $390,223.72. This fund has been invested in United States securities, and at this time, with interest at the rate of 5 per cent. per annum added, amounts to $583,400.90, after having paid from it the Caldera claims, awarded by the Court of Claims."

The bill passed the Senate March 3, and was approved by the President the same day.

French Spoliation Claims.—Dec. 9, 1884, a bill to provide for the ascertainment of claims of American citizens for spoliations committed by the French prior to July 31, 1801, was taken up in the Senate and passed, as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That such citizens of the United States, or their legal representatives, as had valid claims to indemnity upon the French Government arising out of illegal captures, detentions, seizures, condemnations, and confiscations prior to the ratification of the convention between the United States and the French Republic concluded on the 30th day of September, 1800, the ratifications of which were exchanged on the 31st day of July following, may apply by petition to the Court of Claims, within two years from the passage of this act, as hereinafter provided: *Provided*, That the provisions of this act shall not extend to such claims as were embraced in the convention between the United States and the French Republic concluded on the 30th day of April, 1803; nor to such claims growing out of the acts of France as were allowed and paid, in whole or in part, under the provisions of the treaty between the United States and Spain concluded on the 22d day of February, 1819; nor to such claims as were allowed, in whole or in part, under the provisions of the treaty between the United States and France concluded on the 4th day of July, 1831.

SECTION 2. That the court is hereby authorized to make all needful rules and regulations, not contravening the laws of the land or the provisions of this act, for executing the provisions hereof.

SEC. 3. That the court shall examine and determine the validity and amount of all the claims included within the description above mentioned, together with their present ownership, and, if by assignee, the date of the assignment, with the consideration paid therefor: *Provided*, That in the course of their proceedings they shall receive all suitable testimony on oath or affirmation, and all other proper evidence, historic and documentary, concerning the same; and they shall decide upon the validity of said claims according to the rules of law, municipal and international, and the treaties of the United States applicable to the same, and shall report all such conclusions of fact and law as in their judgment may affect the liability of the United States therefor.

SEC. 4. That the court shall cause notice of all petitions presented under this act to be served on the Attorney-General of the United States, who shall be authorized, by himself or his assistant, to examine witnesses, to cause testimony to be taken, to have access to all testimony taken under this act, and to be heard by the court. He shall resist all claims presented under this act by all proper legal defenses.

SEC. 5. That it shall be the duty of the Secretary of State to procure, as soon as possible after the passage of this act, through the American minister at Paris or otherwise, all such evidence and documents relating to the claims above mentioned as can be obtained from abroad; which, together with the like evidence and documents on file in the Department of State, or which may be filed in the Department, may be used before the court by the claimants interested therein or by the United States, but the same shall not be removed from the files of the court; and after the hearings are closed the records of the proceedings of the courts and documents produced before them shall be deposited in the Department of State.

SEC. 6. That on the first Monday of December in each year the court shall report to Congress, for final action, the facts found by it, and its conclusions in all cases which it has disposed of and not previously reported. Such finding and report of the court shall be taken to be merely advisory as to the law and facts found, and shall not conclude either the claimant or Congress; and all claims not finally presented to said court within the period of two years limited by this act shall be forever barred; and nothing in this act shall be construed as committing the United States to the payment of any such claims.

Jan. 14, 1885, the measure was taken up in the House and passed. In the debate which it occasioned, Mr. Phelps made this brief explanation of the tedious history of the claims: "This is certainly a piece of ancient history, but none the worse for its age, if it be a true piece. We are now, at the end of the nineteenth century, providing for the debts of the eighteenth. If they are just, this delay is the strongest reason for our action; and that they are just I honestly believe, and to that conclusion public opinion has at last settled. Fortunately, the origin of these claims is so simple that the obscurity of the past can not becloud it.

"In our Revolutionary War we very generously but very foolishly guaranteed to France the security of her West Indian power. When the war grew fierce between France and England, we of course did not make good our guarantee. We could not; so we were not to blame for this.

"But we went further: we said we would not, and in an official document we declared that our status should be one of absolute neutrality between the two contesting powers. For this we were to blame, and the French marine, hostile before to the English-speaking sailors who came from Great Britain, grew hostile to the English-speaking sailors from America. In their fury they set out on a career of destruction against every craft that was manned by Anglo-Saxon men. They destroyed many merchant-vessels. The owners of these are the claimants in this case. Their Government promptly demanded redress of the French Republic. We talked of $20,000,000. We were met by a counter-claim of two hundred and eighty millions damage which the French Republic had suffered because we had broken our treaty of guarantee.

"Twenty millions against two hundred and eighty millions! The gentleman from Wisconsin would have hesitated. Not so our commissioners. They jumped at the bargain, and were too happy to call it quits. And their treaty was ratified more quickly than will be any of those now pending in the Senate.

"By this convention the United States became the debtor in place of France to all who suffered from French spoliation. Nor did these claimants sleep on their claims. They followed down the centuries—I beg pardon, the century, although they may need to follow down the centuries. They followed the different Congresses down the century, and got what? Forty reports, of which thirty-eight were favorable and the other two decidedly unfavorable. They got committed in the reports which they prepared the greatest lawyers of the age—Webster, Clayton, Choate, Everett, Sumner, Cushing, each preparing one or more reports indorsing the legality of the case.

"But these waking claimants got no money. It is time now that they did; and our committee to-day are taking a first step, not a long one, in the direction of giving them some. We are sending their claims to the Court of Claims, that they may there be judicially examined and judicially stated. And when they come out in legal shape I hope, and I hope that the House wishes, that the moral claim which they will have to payment may be promptly recognized. There are but two substantial objections. They tell us the claims are stale and assigned. Mr. Speaker, will there ever be a private claim against this Government which will not be so delayed as to be stale? Will there ever be a number of citizens, owning claims, who will not in this delay be forced by their necessities to sell their rights? But delay, when the Government only is at fault, and assignment, are no bars to legal claimants. And these claims have the rights of law, not the charities of equity.

"I trust, Mr. Speaker, this bill, the first step toward paying these old debts, may pass. It must if there is much chance that these claims of the eighteenth century shall be paid in the nineteenth, and not have to wait for the twentieth."

The bill was approved by the President, January 20.

Forfeited Land-Grants.—In the House a bill was introduced, declaring forfeited to the United States all lands granted by act of Congress to aid in the construction of any railroad which have not been earned by the grantees, and providing for the adjudication of controversies thereto; but the bill was allowed to lie on the table. A bill to declare forfeited the unearned lands granted to the Atlantic and Pacific Railroad Company to aid in the construction of a railroad and telegraph line from the States of Missouri and Arkansas to the Pacific coast, and to restore the same to settlement and for other purposes, failed through the refusal of the House to concur in amendments with which the Senate passed the original measure. The bill "to declare forfeited certain lands granted to aid in the construction of a railroad in Oregon, and to enforce the same by judicial proceedings," which was passed by the House at the previous session of Congress, was amended by the adoption of a substitute in the Senate, and passed that body January 6, 1885. The House finally concurred in the Senate amendments, and the bill was approved by the President February 2. It is as follows:

Be it enacted, etc., That so much of the lands granted by an act of Congress entitled "An act granting land to aid in the construction of a railroad and telegraph line from Portland to Astoria and McMinnville, in the State of Oregon," approved May 4, 1870, as are adjacent to and conterminous with the uncompleted portions of said road, and not embraced within the limits of said grant for the completed portions of said road, be and the same are hereby declared to be forfeited to the United States and restored to the public domain, and made subject to disposal under the general land laws of the United States.

SECTION 2. That all persons who at the date of the passage of this act are actual settlers in good faith on any of the lands hereby forfeited, and who are otherwise qualified, on making due claim to such lands under the homestead, pre-emption, or other laws, within six months after the same shall have been declared forfeited, shall be entitled to a preference right to enter the same in accordance with the provisions of this act and of the homestead, pre-emption, or other laws, as the case may be, and shall be regarded as having legally settled upon and occupied said lands under said pre-emption, homestead, or other laws, as the case may be, from the date of such actual settlement or occupation; and in case any such settler may not be entitled to thus enter or acquire such land under existing laws, he shall be permitted, within one year after the passage of this act, to purchase not to exceed one hundred and sixty acres of the same, at the price of $1.25 per acre; and the Secretary of the Interior is hereby authorized and directed to make such rules and regulations as will secure to said actual settlers the benefit of these rights: *Provided*, That the price of the even-numbered sections within the limits of said grant and adjacent to and conterminous with the uncompleted portions of said road, and not embraced within the limits of said grant for the completed portions of said road, is hereby reduced to $1.25 per acre.

SEC. 3. That the act of March 3, 1875, entitled "An act for the relief of settlers within railroad limits," is hereby repealed.

Mr. Dolph, of Oregon, made the following explanation of the measure: "By the act of May 4, 1870, there was granted to said company, the Oregon Central Railroad Company of Portland, each alternate section of the public land not mineral, except coal and iron, designated by odd sections, to the amount of ten sections per mile upon each side nearest to the road except such as had been previously reserved or otherwise disposed of or held under valid homestead and pre-emption rights; and also the right to take materials from the public land for the construction of the road and the usual grant of land for depot and station purposes.

"The Oregon Central Railroad Company of Portland had prior to the date of that grant projected a line of railroad from Portland westward to Forest Grove, thence along the west side of the Willamette valley by McMinnville and other west-side towns to the southern boundary of the State of Oregon, and had commenced the construction of that line. It had been engaged in a long contest with the Oregon Central Railroad Company of Salem for the lands granted by the act of Congress of July 25, 1866, granting lands to such company as should be designated by the State of Oregon to aid in the construction of a railroad and telegraph line from Portland, in Oregon, southerly through the Willamette valley to a suitable point of junction with the line of the Central Pacific Railroad Company in California, and, having been unsuccessful in that contest, had come to Congress for aid in the construction of its road.

"The late Hon. Joseph S. Smith, of Oregon, then in Congress, introduced a bill to grant lands to the company to aid in the construction of its road as then projected, but before the bill was passed it was amended so as to limit the grant of land upon the projected line of the company's road to McMinnville, a point about fifty miles from Portland, and through the influence of the late Judge Olney, of Astoria, and other persons interested in getting a line of road from Portland to Astoria, the bill was amended so as to include a grant of land from Forest Grove to Astoria, a distance of about ninety-seven miles.

"Shortly after the passage of that act the Oregon Central Railroad Company of Portland constructed about forty-eight miles of road from Portland to St. Joe, a point about a mile and a half distant from McMinnville, and then failed, and have been unable to continue the construction of the road. The constructed road and the earned and unearned land-grant was transferred to the Oregon and California Railroad Company, a company which has succeeded to the ownership of the grant under the act of July 25, 1866. That company has also acquired fifty miles of additional road from St. Joseph southward upon the original projected line, and is devoting all its energies to the construction of its main line, and nothing has been done toward the construction of the line from Forest Grove to Astoria. Nothing, in fact, has been done in regard to the matter except to make preliminary surveys.

"As I stated upon this floor on a previous occasion, I intend to vote for the forfeiture of this unearned grant; but as this is an important bill to the people of the State I have the honor in part to represent, and as, if it becomes a law, it will undoubtedly have no little effect upon the future settlement and development of portions of my State, I do not feel like letting the opportunity pass without saying that I have come to the conclusion to vote for the forfeiture of this unearned grant with a good deal of reluctance. I do not share in the views of some that the forfeiture of this grant will aid in securing the early construction of the road. I do not see how we can expect to secure the early construction of the road without congressional aid when we have not been able to procure it with the aid of a congressional grant. A railroad constructed from Forest Grove to Astoria would pass through a mountain-broken, timbered country; it will be difficult of construction, quite expensive to build, and when built will have to compete for its traffic with river transportation on the Columbia river."

The spokesman for the opposition to the measure was Mr. Morgan, of Alabama. He said:

"I am following the Supreme Court, which has decided that a grant precisely of the character, as I understand it, of the grant in question in this bill, was a grant *in præsenti* of the legal estate to the railroad company; that it passed every right and every title that the United States had in the land, subject only to be forfeited upon the breach of the condition subsequent. That is what I understand. If it is not a good title as against everybody but the United States, I do not understand what a good title is; and if it is not a good title as against the United States until the declaration of forfeiture, I do not understand what a good title is; and therefore I would maintain that if the railroad company had a tenant in occupation of any of this land, and the United States were to-day to try the title in an action of ejectment with that tenant, the tenant could set up that he held under this grant and under the railroad company, and would have a perfect title against the Government of the United States in the action of ejectment.

"We have got something to do before we resume this title. What is that? We must have what is equivalent to office found under the British law; that is to say, we must have a repossession of the land either by an actual taking of possession or by a constructive legal possession; and we must do it in virtue of the sovereign power of this Government, exercised either through the Legislature or through the judiciary. But these conditions we must comply with before we can resume the title which we have granted out of us and which now rests in the railroad company. It seems to me that is a pretty clear proposition, and therefore if the Government of the United States were to sue a tenant in possession of this land, holding under this corporation to-day, in an action of ejectment, the forfeiture not having been declared, the proceedings to make the forfeiture perfect not having been executed or carried into effect, the title of the plaintiff would fail because it had granted the title out of itself. I do not think it takes a very wise man to see that. It seems to me that if there is any proposition settled in this country in the shape of law, that is settled; and therefore I do not care to waste my time and strength in trying to debate horn-book law in this country, which everybody understands except the few gentlemen who do not want to understand anything about it.

"Now, sir, how are we to get hold of this title? Shall we do it by an act of legislative confiscation? Shall we attempt to do it by an act of legislative confiscation, which the honorable Senator from Indiana foresees would be entirely unavailing? Shall we attempt to march over the ground that separates us from the domain of the judiciary, and usurp to ourselves the power of ultimate and final adjudication upon the rights of property of this railroad company? I maintain that we ought not to.

"I have taken a position a little further in advance, just a little further in advance than that which has been taken and adhered to by the Judiciary Committee of this body, after frequent and close and earnest investigations of this question. That committee, in its previous recommendations upon several bills, as Senators will well remember, had asserted that it was the duty of the Government of the United States, when proceeding to declare a forfeiture, to go to the courts, and the duty of Congress to empower the courts to make the declaration.

To go there as a suitor, to get a judge to declare the forfeiture; and I do not know but that the better opinion among the bar of the United States to-day is, that that is the real duty of the Government whenever it seeks to declare a forfeiture of these lands. That it shall go as a suitor in the courts after having made a seizure of them, as they would in a case of confiscable property go into the courts, and upon a libel filed, or whatever it is that you choose to use, ask the judge to declare a forfeiture as a matter of right.

"I say that I have gone a little further than that. I have done it because I have conceived that the United States was not only a party to a contract in the enactment of these statutes, but that it was a law-maker at the same time; that it was acting in a double capacity of making a law and also of making a contract when these grants were made, and that the Government, through its Congress, had the right to declare that that law had been violated, and that it was no longer, therefore, a shelter of protection to the claimant under its former grant. Perhaps the distinction is not a very palpable one; but perhaps more in deference to the eager earnestness of gentlemen who seem determined to wrest the property from the railroads I have gone with them, believing that many of these roads had forfeited their rights of property in these grants. So I have consented on my part to advocate the doctrine that Congress has the right to make a legislative declaration upon a question of this kind which will have all the effect of office-found under the English law, and will reinstate the United States in the possession of the land.

"Now, sir, if that declaration has all that effect, that is enough, and surely it is as far as we have any precedent for going. The British Parliament have never seen proper to condemn property out and out by a legislative enactment. They have always relied upon that ancient prerogative writ addressed by the king to the coroner, that he would summon a jury in the first instance, and have judicial procedure taken on the question of the right of the crown to repossess itself of lands. That Government has always, in deference to the rights of its citizens and rights of property, maintained that attitude toward its people. It brings to me a sense of humiliation when I think that the British Government can be more just to British subjects than this free American Republic dares to be to its own people."

Mr. Morgan moved to amend the bill by adding the following sections, but the motion failed by a vote of 15 to 28:

Section —. That jurisdiction is hereby conferred on the Circuit Court of the United States for the District of Oregon to hear and determine all questions and controversies concerning the rights and equities in said forfeited lands that are claimed or asserted by the United States, or by any person or corporation claiming the same under or in consequence of any law of the United States, or any act of its lawfully authorized agents, and to enforce any judgment or decree, either interlocutory or final, that said court shall render in respect of said lands or any interest therein.

Sec. —. That it shall be the duty of the District Attorney of the United States for the District of Oregon, under the direction of the Department of Justice, to proceed in the Circuit Court of the United States for the said district, by bill in equity, in the name of the United States of America as plaintiff, against any corporations or persons that claim any interest in the lands hereby declared forfeited, arising under said act of Congress approved May 4, 1870, or under this act, so as to bring before said court for its determination the validity of such claim, whether the same be legal or equitable.

Sec. —. That any person or corporation not made a party defendant in said proceeding, but claiming any interest under the laws of the United States in the lands, or any part thereof, which are declared forfeited by this act, may present such claim by petition in said cause, duly verified by oath; and if the court, upon consideration thereof, shall decide that the adjudication and settlement of such claim is necessary to do complete justice in said cause, the court shall direct that such further proceeding be had upon such petition as that the same may be fully heard and determined, and shall proceed to decree upon the same as fully as if such petitioner had been made a party defendant in said suit: *Provided*, That no such petition shall be filed after twelve months from the date of the filing of the bill in said cause.

Sec. —. That the court, if it shall see fit, may tax all the costs of the suit under the third section of this act against the United States, and shall apportion the costs of any proceeding under the fourth section of this act between the parties according to justice and equity. Any party to the suit instituted under this act shall have the right of appeal from any final decree therein to the Supreme Court of the United States, in the same manner and under the same conditions as are prescribed by law and the rules of said court for appeals in equity cases; and the Supreme Court shall cause said appeal to be advanced on the docket so that the same shall be speedily determined; but no right of appeal shall exist after six months from the time when said final decree is entered on the records of the Circuit Court of the United States.

The bill to declare a forfeiture of lands granted to the Texas Pacific Railroad Company, and for other purposes, which also originated in the House, and passed that body at the previous session of Congress, was amended and passed the Senate, February 19. It was approved by the President, March 2. It is substantially the same as the measure just given, and Mr. Morgan, though favoring its adoption, endeavored to have the above-quoted provisions for the judicial settlement of controversies arising out of the forfeiture incorporated in the bill, and failed.

Coins and Coinage.—Feb. 4, 1885, the House bill for the retirement and recoinage of the trade-dollar, passed at the previous session of Congress, was reported back to the Senate from the Committee on Finance, with an amendment striking out all after the enacting clause and inserting the following:

That until July 1, 1885, United States trade-dollars, if not defaced, mutilated, or stamped, shall be received at the office of the Treasurer or any assistant treasurer of the United States in exchange for a like amount, dollar for dollar, of standard silver dollars of the United States.

Section 2. That the trade-dollars received by the Treasurer or any assistant treasurer of the United States shall not be paid out or in any other manner issued, but, at the expense of the United States, shall be transmitted to the coinage mints and shall be regarded and treated as silver bullion, and, at their bullion value, shall be deducted from the amount of bullion required to be purchased and coined by the act of February 28, 1878, and shall be recoined into standard silver dollars according to the provisions of said act: *Provided*, That the amount to be so deducted as provided in this section shall not exceed $500,000 in any month.

Sec. 3. That all laws and parts of laws authorizing the coinage and issuance of United States trade-dollars are hereby repealed.

Sec. 4. That the President is hereby authorized to renew negotiations with the states of the "Latin Union," and with other foreign powers, for the purpose of making treaties with them in order to secure such co-operation as may enable the nations agreeing thereto to open their respective mints to the free coinage of silver, with full legal-tender power, at an agreed ratio to gold.

This measure was debated earnestly and learnedly, but it was not put upon its passage.

March 2, Mr. Aldrich, of Rhode Island, introduced the following joint resolution, which was passed by the Senate the next day:

Resolved by the Senate, etc, That the President of the United States is hereby requested to enter into negotiations with the states of the Latin Union, and such other foreign powers as he shall deem advisable, with the purpose of securing such treaties with them as shall bind the nations agreeing thereto to open their respective mints to the free coinage of silver with full legal-tender power, at such uniform ratio to gold as shall be agreed upon.

Dec. 4, 1884, in the Senate, Mr. Hill, of Colorado, offered the following resolution:

Resolved, That in the existing depressed condition of the industrial interests of the country, and in presence of the great fall which has taken place and is still in progress in the wages of labor and in the prices of the products of farms, workshops, mills, and mines, the recommendations of the President and of the Secretary of the Treasury that the coinage of silver dollars and the issue of silver certificates shall be immediately and unconditionally prohibited are calculated to create alarm and thereby aggravate the difficulties of the situation, and that to the end that the public mind may be quieted by the assurance that if the total volume of the currency is not to be enlarged in correspondence with the increasing population and exchanges of the country, it shall at least not be reduced by suspending the coinage of silver dollars.

The Senate declares its opinion to be that no valid reason exists at the present time for imposing any new and additional restrictions upon either the coinage of silver dollars or the issue of silver certificates.

The resolution was ably discussed, but was not brought to a vote. Mr. Hill, in the course of his speech on the subject, said: "To now contract the volume of money by one half (which is the ultimate object of most of the persons who urge the stoppage of our silver coinage, and which would probably be the ultimate effect) by the method of demonetizing one of the metals which has heretofore constituted its mass, is wholly indefensible. It must be some great object which induces those who originated such a policy to persist in it after the course of events has so clearly demonstrated the injury and injustice which it must inflict upon the world.

"Certain classes, having the whole world as tributaries, by a system of national debts which has in itself reached fabulous proportions, and which is re-enforced by a vast amount of other public as well as corporate and individual indebtedness, seek to increase the tribute in the form of interest which they are enjoying by the noiseless and insidious process of increasing the value of the money in which it is paid.

"Gold monometallism, which increases the value of credits and in a corresponding degree the burden of debts, is naturally a favorite policy in England, for the double reason that the creditor classes, by whom it is dominated, are enriched by that policy, as against the debtor industrial and tax-paying classes at home, and that the English people as a whole are enriched by it as against the rest of the world, which is involved in an enormous indebtedness to them.

"The London 'Economist' of April 21, 1883, closed its comments upon an address in which Mr. Goschen had pointed out the recent rise in gold and fall in general prices by saying: 'There is some consolation to us in the fact to which he directs special attention, that any increase in the purchasing power of gold is a benefit to creditors. Nearly every nation on the face of the globe is indebted to us, and the result of an appreciation of gold is that we obtain a larger quantity of their commodities in settlement of our claims.'

"H. H. Gibbs, an ex-Governor of the Bank of England, says in an article in the 'British National Review' for July, 1883, that the following ideas, being precisely those of the 'Economist,' are constantly pressed upon the English public: 'England is a creditor nation. The scarcity of gold has made that metal more valuable, and she must needs be the gainer by this, and must continue to be still more the gainer if gold becomes scarcer still. Is it to be expected that she should throw away this advantage?'

"The same reasons which make gold monometallism a favorite policy in England make it a favorite policy in every country and in every section of all countries in which the creditor classes are dominant. Quite as naturally it is not a favorite policy in countries and sections of countries which are heavily loaded with public, corporate, and private debts.

"It was not a fortuitous circumstance that when the silver coinage law was passed in the Senate, over the President's veto, by a vote of 46 to 19, 13 of the 19 votes were given by Senators from New England, New York, and New Jersey. These States have 16 Senators, and the 3 not voting were paired so as to neutralize the vote of 6 Senators who were friendly to the law, so that the entire senatorial representation of the eight Northeastern States without regard to party lines (5 of the

16 being Democrats and 11 Republicans) supported the veto in one solid and unbroken column, either by voting or pairing.

"We must be prepared to expect that the ramified pecuniary interests engaged in this scheme, stimulated as they are to the intensest efforts by the vastness of the profits which success in it will bring to them, controlling the policy of governments in some important countries and having numerous allies and adherents in every country in Europe and in this country, will maintain the struggle to the last. It is in the great power of the gold propagandists and in their persistency, arising from the vast interests at stake, that the difficulties of the question of the monetary standard lie.

"No careful student of the subject can fail to arrive at the conclusion that the abandonment of the use of silver as a money metal must lead to one of the following results: Either the world must suffer an enormous contraction of the volume of money and a corresponding fall in prices, or it must resort to the use of irredeemable paper money."

Mr. Sherman, of Ohio, said, in opposition to the resolution: "I suppose every Senator agrees with the proposition that bimetallism is the best public policy if it is attainable. It has been decided over and over again by the most intelligent nations of the world that silver and gold, traveling side by side, should be the standards of all values. They have changed in their relative market value, but the change has been met by the changing legislation of the times. Alexander Hamilton probably more tersely stated the necessity of bimetallic money than any writer who has followed him, by depicting the great evil it would be to confine the circulation of the world, the money standard of the world, to a single metal, the changes of which might cause a great fluctuation of values. The bimetallic standard of money is accepted by the great body of intelligent men in the United States as the wisest public policy; but this concession is always accompanied with the declaration that these two standards of coin should be made equal to each other according to their general market value, so that the market value of the metal in one tested by the legal ratio should be as near as practicable to the market value of the metal in the other.

"It is impossible to make them exactly of the same value, because for two thousand years the relative value of these metals has been changing, but the changes were slow, and for years imperceptible. In the last four hundred years a greater change has occurred. Four hundred years ago, prior to the discovery of America, eight ounces of silver were worth one ounce of gold. Now it requires eighteen ounces of silver to be worth one ounce of gold, and in the mutation of time the relative value of the two metals has been met by the laws of the intelligent nations from time to time. The general drift has been the fall of silver, or, what is the same in effect, the rise of gold, but this variance has not always continued, for the discovery of gold in California caused gold to decline in relative value, and this continued until the Comstock mine caused a decline in silver. Even with these fluctuations, these two metals have maintained their relative value more nearly than any other two great natural productions.

"The act I have referred to was passed when from various causes the decline of silver became marked; and this act was designed to check the decline, and to restore silver to its legal relation to gold; and now, Mr. President, I say the experiment has been tried. It was entered into for the highest possible object. It has been properly tested. Seven years, nearly, have passed away since the act of Feb. 28, 1878, was passed. The law has been in full force during all that time. The total coinage since that time, by the last report of the Secretary of the Treasury, was $185,000,000, now about $187,000,000. The total amount of these silver dollars now in circulation among the people is $41,000,000, or less than one fourth the amount coined. The balance belongs to the Government of the United States, and is in the Treasury.

"What has been shown by this experiment? Let us see. In the first place, it has been shown that the law of Congress has not restored silver to its old relation to gold. When that law took effect the silver in the silver dollar was worth only ninety-one cents in gold. The hope of those who tried the experiment was that if we should give a substantial occupation to all the silver mined in our own country, or the great body of it, we should restore the relation so that the silver in the dollar of 412½ grains of standard silver would be equal to 25·8 grains of standard gold. That expectation has been disappointed. On the contrary, under this law, from which so much was expected, silver has steadily gone down.

"Although we have absorbed $2,000,000 a month to purchase silver bullion for coinage, and have coined 28,000,000 silver dollars a year, and in this way have withdrawn from the market the great body of the domestic production of this country, silver has steadily gone down in relative market value. I have looked at the prices paid; I have them before me. According to the reports of the Director of the Mint from the year 1878, the first year during which this law was in operation, it appears that in 1878 one ounce of fine silver was worth $1.18, or the silver in a silver dollar was worth 91 cents. In 1884, after seven years of experience, an ounce of fine silver is worth in the market $1.11, which means that the silver in the silver dollar is worth between 85 and 86 cents; so that now, instead of 412½ grains of silver being equal to a dollar in gold, it requires, as near as may be, one ounce, or 480 grains of standard silver, to be equal in market value to a gold dollar.

"So, then, this first expectation of the friends of the bill has utterly failed. Not only has this law not restored silver to its former ratio, but it has gone down gradually in the face of a determined effort on the part of the United States to prevent that depreciation. It only shows that, although the Government of the United States is very powerful in money affairs in this world, it is not powerful enough to prevent that inevitable and continuous depreciation of silver compared with gold that has gone on since the discovery of America, and no power on this continent can prevent that gradual widening of the margin between these two metals. The only question to me of practical politics is whether we ought not ourselves to respect what we can not resist, and not, like King Canute, wait until the tide overwhelms us. Should we not change our ratio, as other nations have done before us, and seek by adapting our coinage to the relative market value of the two metals to check the depreciation of silver, or at least to coin silver at the same value we pay for it, and not try to make a delusive profit out of our own citizens?

"But there was another expectation which has not been realized. It is shown that the silver dollar will not circulate among the people. It was firmly believed when the law was passed that the silver dollar would be taken everywhere, and, to a certain extent, it is taken everywhere as a matter of convenience; but that this silver dollar will not be hoarded or laid away in the stockings of the most ignorant man in the United States, that it will not be received and held with confidence, is shown by the experience of the whole country. Only forty-one million silver dollars are now in circulation, and any attempt to force the circulation of silver dollars has proved unavailing."

Feb. 28, in the Senate, Mr. Mitchell, of Pennsylvania, offered the following resolution, of which nothing came:

Whereas, The commercial value of silver has so far depreciated that the standard silver dollars coined under the act of 1878 are now worth but 82 cents in the open market; and, whereas the continued coinage of such depreciated dollars, now amounting to nearly $200,000,000, seriously threatens a suspension of gold payments by the Government, from necessity, and the consequent banishment of gold coin from active circulation: Therefore,

Resolved, That the Committee on Finance be and hereby is instructed forthwith to prepare and report to the Senate a proper bill to provide for the immediate suspension of the coinage of standard silver dollars, and for the resumption of such coinage whenever the commercial value of the standard dollars aforesaid shall rise to within 5 per cent. of par with the standard gold dollars of the United States.

In the Senate, and in the House, bills for the suspension of the coinage of silver dollars were introduced, but they were not reported from the committees to which they were referred. In the House the subject came up indirectly in the Sundry Civil Appropriation Bill. There was a clause in that measure, as originally reported, providing for the suspension of silver coinage, and Mr. Randall, of Pennsylvania, before consideration of the bill, Feb. 26, submitted the following resolution, which required a two-third vote to pass it:

Resolved, That the rules be suspended so as to discharge the Committee of the Whole House on the state of the Union from the further consideration of the bill (H. R. 8256) making appropriations for sundry civil expenses of the Government for the fiscal year ending June 30, 1886, and for other purposes, and consider the same for four hours, which time shall be occupied in debate on the clauses relating to the suspension of silver coinage and the World's Industrial and Cotton Exposition, three hours to be occupied on the first-named clause and one hour on the second, said time to be equally divided; and said bill shall be subject only to amendments to strike out or amend said clauses, after which the previous question shall be considered as ordered.

This resolution was understood as presenting the question of the suspension of silver coinage to the House, and it failed by the following vote:

Yeas—G. E. Adams, J. J. Adams, Arnot, Bagley, Barbour, Barr, Bayne, Beach, Belmont, Bingham, Bisbee, Boutelle, Bowen, Bratton, F. B. Brewer, W. W. Brown, T. M. Browne, Buckner, Burleigh, J. M. Campbell, Collins, Connolly, Converse, S. S. Cox, Craig, Cullen, Dargan, G. R. Davis, R. T. Davis, Deuster, Dingley, Dixon, Dunham, Eaton, Elliott, Ellis, Ermentrout, Evans, Everhart, Ferrell, Fiedler, Findlay, Follett, Garrison, Greenleaf, Guenther, Hancock, Hardy, Harmer, H. H. Hatch, Haynes, A. S. Hewitt, Hiscock, Hitt, Hoblitzell, Holton, Hopkins, Horr, Howey, Hunt, Hutchins, James, Johnson, B. W. Jones, Kean, Kelley, Ketcham, Lacey, Lawrence, Long, Lyman, McComas, McCormick, Millard, S. H. Miller, Mitchell, Morse, Moulton, Muller, Mutchler, Nutting, Charles O'Neill, Parker, Payne, Phelps, Poland, Post, Potter, Pusey, Randall, Ranney, G. W. Ray, T. B. Reed, Rockwell, W. F. Rogers, Russell, Seymour, C. R. Skinner, A. Herr Smith, Snyder, Spooner, Spriggs, Steele, Stevens, Storm, Strait, Swope, Talbott, Tucker, Van Alstyne, Wadsworth, Wait, Washburn, Wemple, Milo White, Whiting, John Winans, Woodward—118.

Nays—Aiken, Alexander, Anderson, Atkinson, Ballentine, Barksdale, Belford, Bennett, Blackburn, Bland, Blount, Breckinridge, Breitung, Broadhead, Buchanan, Budd, Burnes, Cabell, Caldwell, J. E. Campbell, Candler, Cannon, Carleton, Cassidy, Clardy, Clay, Clements, Cobb, Cook, Cosgrove, W. R. Cox, D. B. Culberson, Davidson, L. H. Davis, Dibble, Dibrell, Dockery, Dowd, Dunn, Eldredge, Ellwood, English, Foran, Forney, Funston, Geddes, Gibson, Glascock, Goff, Graves, Green, Halsell, Hammond, Hanback, Hardeman, Hart, W. H. Hatch, Hemphill, T. J. Henderson, Henley, Hepburn, Herbert, G. W. Hewitt, Hill, Holman, Holmes, Houk, Houseman, J. H. Jones, J. K. Jones, J. T. Jones, Keifer, Kellogg, Kleiner, Lamb, Lanham, Le Fevre, Lewis, Lore, Lovering, Lowry, McCoid, Matson, Maybury, J. F. Miller, Milliken, Mills, Money, Morgan, Muldrow, Murphy, Murray, Nelson, Ochiltree, O'Ferrall, J. J. O'Neill, Patton, Payson, Peel, Perkins, Peters, Pettibone, Pierce, Price, Pryor, Reagan, J. W. Reid, Reese, Riggs, Robertson, J. H. Rogers, Rosecrans, Rowell, Ryan, Seney, Shively, Singleton, T. G. Skinner, H. Y. Smith, Springer, Stephenson, Charles Stewart, Stockslager, C. A. Sumner, D. H. Sumner, J. M. Taylor, Thomas, Tillman, Tully, H. G. Turner, Oscar Turner, Vance, Van Eaton, Wallace, Ward, A. J. Warner, Richard Warner, Weaver, Wellborn, Weller, J. D. White, Wilkins, Willis, James Wilson, W. L. Wilson, E. B. Winans, G. D. Wise, Wood, Worthington, Yaple, York, Young—152.

Not Voting—Blanchard, Boyle, Brainerd, J. H. Brewer, Brumm, Felix Campbell, Chalmers, Covington, Crisp, W. W. Culbertson, Curtin, Cutcheon, Dorsheimer, Finerty, Fyan, George, D. B. Henderson, Hooper, Hurd, Jeffords, Jordan, King, Laird, Libbey, McAdoo, McMillin, Morrill, Morrison, Neece, Nicholls, Oates, O'Hara, Paige, Rankin, Ossian Ray, Rice, J. S. Robinson, W. E. Robinson, Shaw, Slocum, Smalls, J. W. Stewart, Stone, Struble, E. B. Taylor, J. D. Taylor, Thompson, Throckmorton, Townshend, Valentine, Wakefield, Williams, J. S. Wise, Wolford—54.

On the announcement of the vote, Mr. Randall said:

"Recognizing the significance of the vote which has just been taken, and knowing that the issue was distinctly made as against the silver clause of this bill, being aware also that a majority has declared against that proposition which under a direct vote to strike out would have carried, I therefore now assume to myself the responsibility, believing that the members of the Appropriations Committee if I had an opportunity to confer with them would unanimously sustain me, of proposing to move to suspend the rules in manner as has been stated in the resolution, with everything connected with suspension of coinage of silver eliminated from the bill and from the resolution."

The Alleged Subsidy Vote.—In the post-office appropriation bill, as originally reported in the House, the following provision was inserted:

For transportation of mails on foreign steamships and for foreign administration for intermediary, territorial, and sea transit of foreign mails, $370,000.

For transporting the mails of the United States in American steamships between any port of the United States and any foreign port, or between ports of the Atlantic and ports of the Pacific touching at any foreign port, an amount not exceeding $600,000 of the net revenues of the Post-Office Department of the United States on mail matter sent to foreign countries during the fiscal year next preceding the date of the contract for said service: *Provided*, That the contract for said service shall be entered into by the Postmaster-General only after legal advertisement with the lowest responsible bidder, for a term not exceeding four years, and at a rate not to exceed fifty cents per mile on the trip each way of actual nautical miles traveled between terminal ports for each trip actually made, which shall not be increased on account of expedition or increased number of trips: *Provided further*, That the general laws regulating the transportation of inland mails shall be applicable to such contracts except as herein provided: *And provided further*, That vessels engaged in this service shall be of American registry, and shall in time of war be liable to charter or purchase by the United States at reasonable rates, and all laws and parts of laws in conflict with the provisions of this act be and the same are hereby repealed; and this act shall take effect from and after July 1, 1885.

On this matter one of the bitterest contests of the session occurred. While the bill was under consideration in the Committee of the Whole, Mr. Holman, of Indiana, moved to strike out the clause in regard to contracting with American steamships as far as the second proviso. The motion was carried; and when the bill was reported in the House and the question was put as to agreeing with this amendment, Feb. 13, 1885, the House approved of it by the following vote:

Yeas—Aiken, Alexander, Anderson, Ballentine, Barksdale, Bayne, Beach, Bennett, Blackburn, Bland, Blount, Boyle, Brainerd, Bratton, W. W. Brown, T. M. Browne, Buchanan, Burns, Cabell, Caldwell, J. E. Campbell, Candler, Cannon, Carleton, Clay, Clements, Connolly, Cosgrove, Covington, W. R. Cox, Crisp, D. B. Culberson, Davidson, L. H. Davis, Deuster, Dibrell, Dockery, Dunn, Eaton, Eldredge, Elliott, English, Ermentrout, Fiedler, Foran, Forney, Fyan, Geddes, Gibson, Graves, Green, Guenther, Halsell, Hammond, Hardeman, W. H. Hatch, Hemphill, G. W. Hewitt, Holman, Hopkins, B. W. Jones, J. H. Jones, J. K. Jones, J. T. Jones, Lanham, Le Fevre, Lowry, McAdoo, McMillin, Matson, Maybury, J. F. Miller, Mills, Moulton, Muldrow, Murray, Neece, Nicholls, Ochiltree, O'Ferrall, Paige, Peel, Peters, Pierce, Post, Pryor, Pusey, Randall, Reagan, Reese, Riggs, Robertson, J. H. Rogers, Rowell, Ryan, Seney, Seymour, Shively, Singleton, T. G. Skinner, H. Y. Smith, Snyder, Spriggs, Charles Stewart, Stockslager, D. H. Sumner, Swope, J. M. Taylor, Thompson, Townshend, Tully, H. G. Turner, Oscar Turner, Van Alstyne, Van Eaton, Ward, A. J. Warner, Richard Warner, Wellborn, Wilkins, Willis, James Wilson, W. L. Wilson, E. B. Winans, John Winans, G. D. Wise, Wolford, Wood, Worthington, Yaple, York—131.

Nays—Bagley, Barbour, Belford, Bingham, Bisbee, Boutelle, Breitung, F. B. Brewer, J. H. Brewer, Broadhead, Buckner, Budd, Burleigh, J. M. Campbell, Cassidy, Clardy, Collins, S. S. Cox, W. W. Culbertson, Cullen, Cutcheon, Dargan, G. R. Davis, R. T. Davis, Dingley, Dixon, Dorsheimer, Ellis, Ellwood, Everhart, Finerty, Follett, Funston, Garrison, George, Glascock, Greenleaf, Hanback, Harmer, H. H. Hatch, Haynes, Hill, Hiscock, Hitt, Holmes, Horr, Houk, Houseman, Howey, Hunt, James, Jeffords, Kean, Keifer, Kelley, Ketcham, King, Lawrence, Libbey, Long, Lore, Lovering, Lyman, McCoid, McCormick, Millard, Milliken, Money, Morgan, Morse, Muller, Murphy, Nelson, Nutting, O'Hara, Charles O'Neill, J. J. O'Neill, Parker, Payne, Perkins, Pettibone, Poland, Price, Ranney, T. B. Reed, J. W. Reid, Rosecrans, Russell, C. R. Skinner, Slocum, Smalls, Spooner, Steele, Stephenson, Stevens, J. W. Stewart, Stone, Strait, Struble, J. D. Taylor, Thomas, Tillman, Vance, Wadsworth, Wakefield, Wallace, Washburn, Weaver, Wemple, J. D. White, Milo White, Whiting—112.

Not Voting—G. E. Adams, J. J. Adams, Arnot, Atkinson, Barr, Belmont, Blanchard, Bowen, Breckinridge, Brumm, Felix Campbell, Chalmers, Cobb, Converse, Cook, Craig, Curtin, Dibble, Dowd, Dunham, Evans, Ferrell, Findlay, Goff, Hancock, Hardy, Hart, D. B. Henderson, T. J. Henderson, Henley, Hepburn, Herbert, A. S. Hewitt, Hoblitzell, Holton, Hooper, Hurd, Hutchins, Johnson, Jordan, Kellogg, Kleiner, Lacey, Laird, Lamb, Lewis, McComas, S. H. Miller, Mitchell, Morrill, Morrison, Mutchler, Oates, Patton, Payson, Phelps, Potter, Rankin, G. W. Ray, Ossian Ray, Rice, J. S. Robinson, W. E. Robinson, Rockwell, W. F. Rogers, Shaw, A. Herr Smith, Springer, Storm, C. A. Sumner, Talbot, E. B. Taylor, Throckmorton, Tucker, Valentine, Wait, Weller, Williams, J. S. Wise, Woodward, Young—81.

An amendment was then made increasing the allowance for foreign mails from $370,000 to $425,000. The Senate, when the bill came up for consideration in that body, February 23, inserted the following in lieu of Mr. Holman's provision:

For transportation of foreign mails, including railway transit across the Isthmus of Panama, $800,000. And the Postmaster-General is hereby authorized to enter into contracts for the transportation of any part of said foreign mails, after legal advertisement, with the lowest responsible bidder, at a rate not exceeding fifty cents a nautical mile on the trip, each way, actually traveled between the terminal points: *Provided*, That the mails so contracted shall be carried on American steamships, and that the aggregate of such contracts shall not exceed one half of the sum hereby appropriated.

The vote for the amendment was as follows:

Yeas—Blair, Bowen, Brown, Call, Cameron of Wisconsin, Chace, Conger, Cullom, Dolph, Frye, Hale, Harrison, Hawley, Hoar, Ingalls, Jones of Nevada, Lapham, McMillin, Mahone, Miller of California, Miller of New York, Mitchell, Morgan, Morrill, Platt, Plumb, Pugh, Sawyer, Sewell, Wilson—30.

Nays—Bayard, Beck, Coke, Colquitt, Garland, George, Groome, Hampton, Harris, Hill, Jonas, Maxey, Pendleton, Saulsbury, Slater, Vest, Voorhees, Williams—18.

Not Voting—Aldrich, Allison, Butler, Camden, Cameron of Pennsylvania, Cockrell, Dawes, Edmunds, Fair, Farley, Gibson, Gorman, Jackson, Jones of Florida, Kenna, Lamar, Logan, McPherson, Manderson, Palmer, Pike, Ransom, Riddleberger, Sabin, Sherman, Vance, Van Wyck, Walker—28.

The House non-concurred in this amendment, the whole discussion turning upon the question whether it did not virtually grant a subsidy to the Pacific Mail Company. March 3, after the failure of a conference to agree on the subject, Mr. Horr, of Michigan, moved that the House recede from its non-concurrence, but the motion was lost by the following vote:

Yeas—G. E. Adams, J. J. Adams, Aiken, Arnot, Atkinson, Bagley, Barbour, Barr, Bingham, Bisbee, Blanchard, Boutelle, Brainerd, Breitung, F. B. Brewer, J. H. Brewer, Broadhead, W. W. Brown, Brumm, Buckner, Budd, Burleigh, J. M. Campbell, Cassidy, Clardy, Converse, S. S. Cox, W. W. Culbertson, Cullen, Curtin, Cutcheon, Dargan, G. R. Davis, R. T. Davis, Dingley, Dixon, Dorsheimer, Dunham, Elliott, Ellis, Ellwood, Evans, Everhart, Findlay, Funston, Garrison, George, Glascock, Greenleaf, Hanback, Hancock, Harmer, Hart, H. H. Hatch, Haynes, D. B. Henderson, A. S. Hewitt, Hill, Hiscock, Hitt, Hoblitzell, Holton, Horr, Houk, Howey, Hunt, James, Jeffords, Johnson, Kean, Kellogg, Ketcham, King, Lacey, Lawrence, Lewis, Libbey, Lore, Lovering, Lyman, McCormick, Millard, S. H. Miller, Money, Morgan, Morrill, Moulton, Muller, Mutchler, Nutting, Oates, O'Hara, Charles O'Neill, Payne, Payson, Perkins, Phelps, Poland, Potter, Pusey, Ranney, G. W. Ray, Ossian Ray, T. B. Reed, Rockwell, W. F. Rogers, Rosecrans, Russell, C. R. Skinner, Slocum, Smalls, A. Herr Smith, Spooner, Stephenson, Stevens, J. W. Stewart, Strait, Struble, J. D. Taylor, Thomas, Tillman, Valentine, Wadsworth, Wait, Wakefield, J. D. White, Milo White, Whiting—128.

Nays—Alexander, Anderson, Ballentine, Barksdale, Bayne, Beach, Belmont, Bennett, Bland, Boyle, Bratton, Breckinridge, T. M. Browne, Buchanan, Cabell, Caldwell, J. E. Campbell, Candler, Cannon, Carleton, Clay, Cobb, Connolly, Cosgrove, W. R. Cox, Crisp, D. B. Culberson, Davidson, L. H. Davis, Deuster, Dibble, Dibrell, Dockery, Dowd, Dunn, Eaton, Eldredge, English, Fiedler, Follett, Foran, Geddes, Gibson, Graves, Guenther, Halsell, Hammond, Hardy, W. H. Hatch, Hemphill, T. J. Henderson, Hepburn, G. W. Hewitt, Holman, Hopkins, Houseman, B. W. Jones, J. H. Jones, J. K. Jones, Jordan, Lamb, Lanham, Le Fevre, Lowry, McAdoo, McComas, McMillin, Matson, Maybury, J. F. Miller, Mills, Mitchell, Muldrow, Murphy, Neece, Nelson, Ochiltree, O'Ferrall, J. J. O'Neill, Paige, Patton, Peel, Peters, Pierce, Post, Price, Pryor, Reagan, J. W. Reid, Riggs, Robertson, J. H. Rogers, Seney, Seymour, Shively, Singleton, T. G. Skinner, H. Y. Smith, Snyder, Spriggs, Springer, Charles Stewart, Stockslager, Storm, Swope, Talbott, J. M. Taylor, Thompson, Townshend, Tucker, H. G. Turner, Oscar Turner, Van Alstyne, Vance, Van Eaton, Wallace, Ward, Richard Warner, Weaver, Wellborn, Weller, Wemple, Wilkins, Willis, W. L. Wilson, E. B. Winans, G. D. Wise, Wolford, Wood, Woodward, Worthington, Yaple—132.

Not Voting—Belford, Blackburn, Blount, Bowen, Burnes, Felix Campbell, Chalmers, Clements, Collins, Cook, Covington, Ermentrout, Ferrell, Finerty, Forney, Fyan, Goff, Green, Hardeman, Henley, Herbert, Holmes, Hooper, Hurd, Hutchins, J. T. Jones, Keifer, Kelley, Kleiner, Laird, Long, McCoid, Milliken, Morrison, Morse, Murray, Nicholls, Parker, Pettibone, Randall, Rankin, Reese, Rice, J. S. Robinson, W. E. Robinson, Rowell, Ryan, Shaw, Steele, Stone, C. A. Sumner, D. H. Sumner, E. B. Taylor, Throckmorton, Tully, A. J. Warner, Washburn, Williams, James Wilson, John Winans, J. S. Wise, York, Young—63.

On the same day, after a second conference, the House receded from its non-concurrence by a vote of 98 to 89.

Immediate Delivery.—In the Post-Office appropriation bill, as it passed the House, the following provision for a special delivery of letters was inserted:

Section 3. That a special stamp of the face valuation of ten cents may be provided and issued, whenever deemed advisable or expedient, in such form and bearing such device as may meet the approval of the Postmaster-General, which, when attached to a letter, in addition to the lawful postage thereon, the delivery of which is to be at a free-delivery office, or at any city, town, or village containing a population of 4,000 or over, according to the last Federal census, shall be regarded as entitling such letter to immediate delivery within the carrier limit of any free-delivery office, which may be designated by the Postmaster-General as a special-delivery office, or within one mile of the post-office at any other office coming within the provisions of this section which may in like manner be designated as a special-delivery office.

Sec. 4. That such specially stamped letters shall be delivered from seven o'clock ante meridian up to twelve o'clock midnight at offices designated by the Postmaster-General under section 3 of this act.

Sec. 5. That to provide for the immediate delivery of letters bearing the special stamp, the postmaster at any office which may come within the provisions of this act may, with the approval of the Postmaster-General, employ such person or persons as may actually be required for such service, who, upon the delivery of such letter, will procure a receipt from the party addressed, or some one authorized to receive it, in a book to be furnished for the purpose, which shall, when not in use, be kept in the post-office, and at all times subject to examination by an inspector of the department.

Sec. 6. That to provide for the payment of such persons as may be employed for this service, the postmaster at any office designated by section 3 of this act shall keep a record of the number of letters received at such office bearing such special stamp, which number shall correspond with the number entered in the receipt-books heretofore specified; and at the end of each month he may pay to such person or persons employed a sum not exceeding 80 per cent. of the face value of all such stamps received and recorded during that month: *Provided*, That in no case shall the compensation so paid to any one person exceed thirty dollars per month: *And provided further*, That nothing in this act shall in any way interfere with the prompt delivery of letters as now provided by law or regulation of the Post-Office Department.

The special-stamp provision was stricken out of the bill by the Senate, the House non-concurred, and the contest in regard to it was not closed until the last day of the session, when the Senate, after a second conference, abandoned its amendment.

Discrimination against American Products.—March 3, 1885, the House Committee on Foreign Affairs made the following report in regard to the alleged discriminating duties against American products in Germany:

> That having had the resolution under consideration, your committee is of the opinion that the action of the German authorities has been unfavorable to the introduction into the German Empire of several of the products of the United States, to wit, pork, wheat, rye, and particularly petroleum.
>
> Your committee therefore recommend the adoption of the following resolution:
>
> *Resolved*, That it is the sense of the House of Representatives that the President of the United States be requested to take immediate steps to secure to the United States equal benefits in the German Empire with other nations as to all articles of commerce of the United States under the most-favored-nation clause of the treaty of 1828 made with Prussia, and now in force between the United States and the German Empire.

Objection was made to putting the resolution on its passage, and it failed to receive any consideration in the House.

Constitutional Amendments.—There were constitutional amendments proposed requiring the consent of the House to treaties affecting the revenues; providing that neither the United States nor any State shall abridge the right of suffrage on account of sex; and modifying the constitutional provisions in regard to the veto power.

Postal Reduction.—One of the several clauses in the Post-Office appropriation bill which occasioned discussion as introducing new legislation was the proposition to increase the limit of weight for letters paying single postage. As finally adopted, the clause was as follows:

> That upon all matter of the first class, as defined by chapter 180 of the laws of Congress, approved March 3, 1879, entitled "An act making appropriations for the service of the Post-Office Department for the fiscal year ending June 30, 1880, and for other purposes," and by that act declared subject to postage at the rate of three cents for each half-ounce or fraction thereof, and reduced by the act of March 3, 1883, to two cents for each half-ounce or fraction thereof, postage shall be charged, on and after the first day of July, 1885, at the rate of two cents for each ounce or fraction thereof; and drop letters shall be mailed at the rate of two cents per ounce or fraction thereof, including delivery at letter-carrier offices, and one cent for each ounce or fraction thereof where free delivery by carrier is not established. That all publications of the second class, except as provided in section 25 of said act, when sent by the publisher thereof, and from the office of publication, including sample copies, or when sent from a news agency to actual subscribers thereto, or to other news agents, shall, on and after July 1, 1885, be entitled to transmission through the mails at one cent a pound or a fraction thereof, such postage to be prepaid as now provided by law. Any article or item in any newspaper or other publication may be marked for observation, except by written or printed words, without increase of postage.

Army Claims.—Feb. 24, 1885, Mr. Cockrell, of Missouri, brought up the House bill, passed by that body at the first session of the Forty-eighth Congress, to provide for the settlement of claims of officers and enlisted men for loss of private property destroyed in the military service of the United States. It was amended and passed by the Senate as follows:

> That the proper accounting officers of the Treasury be and they are hereby authorized and directed to examine into, ascertain, and determine the value of the private property belonging to officers and enlisted men in the military service of the United States which has been, or may hereafter be, lost or destroyed in the military service under the following circumstances:
>
> 1. When such fault or destruction was without fault or negligence on the part of the claimant.
>
> 2. Where the private property so lost or destroyed was shipped on board an unseaworthy vessel by order of any officer authorized to give such order or direct such shipment.
>
> 3. Where it appears that the loss or destruction of the private property of the claimant was in consequence of his having given his attention to the saving of the property belonging to the United States which was in danger at the same time and under similar circumstances. And the amount of such loss so ascertained and determined shall be paid out of any money in the Treasury not otherwise appropriated, and shall be in full for all such loss or damage: *Provided*, That any claim which shall be presented and acted on under authority of this act shall be held as finally determined, and shall never thereafter be reopened or considered: *And provided further*, That this act shall not apply to losses sustained in time of war or hostilities with Indians: *And provided further*, That the liability of the Government under this act shall be limited to such article of personal property as the Secretary of War, in his discretion, shall decide to be reasonable, useful, necessary, and proper for such officer or soldier while in quarters, engaged in the public service, in the line of duty.
>
> *And provided further*, That all such claims now existing shall be presented within two years from the passage of this act, and not after; and all such claims hereafter arising shall be presented within two years, and not after, from the occurrence of the loss or destruction.

The House concurred in the Senate amendment February 28, and the bill was approved by the President March 3d.

Retired List for Soldiers.—Jan. 7, 1885, the Senate took up and passed the House bill to authorize a retired list for privates and non-commissioned officers of the United States Army who have served for a period of thirty years and upward. It provides that, when an enlisted man has served as such thirty years in the United States Army or Marine Corps, either as a private or a non-commissioned officer, or both, he shall, by making application to the President, be placed upon the retired list, created by the act, with the rank held by him at the date of retirement, receiving thereafter 75 per cent. of the pay and allowances of the rank upon which he was retired. The measure was approved by the President, February 17. The reasons justifying the measure are set forth in the report of the Military Commission of the Senate as follows:

> Something is needed to give greater stability and a better standing to the enlisted man in our military service. If he could feel that he would have a proper provision for his old age, he would be more likely to support the monotonous life of the service contentedly.

Were such a provision made, it would go far to make our military service an attractive one for respectable men, and in this way to get rid of the disreputable characters who take the first opportunity to desert.

It is scarcely necessary to say that desertion is not only a great loss to the Government in men, money, and material, but it is the source of serious demoralization.

The annual desertions from our army are between three and four thousand, and any measure that would lessen this number might well be considered an economical one; but beyond the question of economy stands that of justice. For it is no more than just that the soldier who has given all the best years of his life to the military service of the country should have some provision made for his old age besides the present Soldiers' Home, where he is separated from his family.

It is the opinion of the Lieutenant-General of the Army that thirty years would be the proper period of service to authorize the retirement of a private soldier or a non-commissioned officer. The passage of this bill would not entail much expense for the Government, because there are in the army only fifty enlisted men who have served thirty years.

Miscellaneous.—A bill to provide permanent reservations for the Indians in northern Montana, and for other purposes, passed the Senate, but objection was made to its consideration in the House. A bill to enable the President to accept invitations of foreign governments to international exhibitions and to appoint commissioners thereto, and for other purposes, passed the Senate, but went no further. A motion to suspend the rules in the House and take up the bankruptcy bill failed to receive the requisite majority. A bill to prohibit the issue of treasury notes of less denomination than five dollars, and to provide for the issue of one, two, and five dollar silver certificates, was rejected in the House. A bill to repeal all laws providing for the pre-emption of the public lands, originating in the House, was debated at great length in the Senate and passed with amendments, in which the House refused to concur. A Senate bill to amend sections 2474 and 2475 of the Revised Statutes of the United States, setting apart a certain tract of land lying near the head-waters of the Yellowstone as a public park, was passed by the House with amendments, in which the Senate refused to concur. A bill to provide for the distribution of the statutes of the United States and the "Congressional Record" to designated incorporated bodies, institutions, and associations within the several States and Territories was passed by the Senate, but its consideration in the House was objected to. A bill to prohibit the removal of any honorably discharged Union soldier, sailor, or marine, or the widow or dependent relative of any deceased Union soldier, sailor, or marine, from any office in the civil service of the United States, except for specific causes, was tabled in the House. An act limiting the time for the presentation of claims against the United States passed the House, but fell by the way in the Senate. An act to establish a department of agriculture passed the House and was reported in the Senate with amendments, but got no further. A bill to quiet the title of settlers on the Des Moines river lands in Iowa, and for other purposes, was discussed in the Senate at great length, and finally passed at too late a day to get any further. A bill to enable the people of that part of the Territory of Dakota south of the forty-sixth parallel of north latitude to form a Constitution and State government, and for the admission of the State into the Union on an equal footing with the original States, and for other purposes, passed the Senate, but was not acted upon in the House. A bill regulating the fees of pension and claim agents passed the Senate, was reported in the House, and debated, but not pushed to a passage. A bill providing for the appointment of a commission on the subject of the alcoholic liquor traffic passed the Senate.

Precedence at Inauguration.—In accordance with the usual custom, the ceremonies connected with the inauguration of the President were put in the hands of a senatorial committee of arrangements, and their provisions for the accommodation of the House gave rise to some bitter feeling. March 2, 1885, Mr. Mills, of Texas, offered the following resolution, and moved to suspend the rules and pass it:

> *Resolved by the House of Representatives*, That the committee appointed to arrange the inaugural ceremonies for the 4th instant having declined to give to the Representatives in Congress their proper place, we will decline to take any part in said ceremonies at the Capitol.

In support of the resolution, Mr. Reagan, of Texas, said: "The President of the United States is to be inaugurated and the two houses of Congress are to adopt the usual courtesies and regulations for the witnessing of that inauguration. The two houses make up the Congress of the United States. It is not composed of a Senate alone. Each house is entitled to be respected and to have its voice in making the appropriate arrangements and to occupy its proper position in the ceremonies connected with the inauguration. The Representatives of the American people should not permit the senatorial branch to take absolute, unqualified control of the inauguration of the President, ignoring the people's Representatives, and after they have accommodated themselves on the right of the President who is to be inaugurated, and placed diplomats, judges, heads of departments, bureau officers, military officers, and everybody else in the second place of honor, condescending to place the three hundred and twenty-five Representatives of the American people in the last place of honor instead of consulting them and permitting them to occupy the place that common right and common decency and courtesy demand for them.

"Until 12 o'clock of March 4 this House is in existence, and a number of Senators will have no longer tenure than the whole of the House; and it is the Congress of the United States that ought to make arrangements for the inauguration of the President according to custom and precedent. It is not for a single body of this Congress to dictate to the other co-ordinate branch of Congress and to assign it a subordinate and inferior position. If that is done, it can not be otherwise than an intentional and deliberate discourtesy on the part of the Senate. I feel that the Representatives of the people will degrade and dishonor themselves if they do not resent that discourtesy; and that we could not answer to our constituents any more than we could answer to future Houses of Representatives if we permit this degradation.

"I regret, Mr. Speaker, that any such question should have arisen. But common courtesy and the rules of propriety demanded that there should have been a joint committee of the two houses of Congress to have made these regulations, and not that one house should set itself above everything else. I ask by what authority, by what law, by what custom does it assume this new prerogative of absolutely controlling the inauguration of the President?

"They go further, and provide that if it is an inclement day the President shall be inaugurated in the Senate-chamber instead of in the Representatives' hall, before the Representatives of the people, and where a larger number of the people of the country at large can be witnesses of that ceremony. It seems to be a close corporation, arranging everything to suit itself and manifesting deliberate discourtesy to the House, a discourtesy which if not resented ought to degrade and dishonor the men who submit to it."

The motion to suspend the rules failed by a vote of 55 yeas to 185 nays. In the Senate, on the same day, Mr. Sherman, of Ohio, made the following explanation in behalf of himself and other members of the committee on inauguration arrangements: "I notice in the newspapers and in other places that an impression prevails that the committee on arrangements appointed by the Senate to take charge of the inauguration ceremonies have departed from the established rules in respect to the conduct of the ceremonies. I wish now to correct that impression, and to say that in all respects the rules adopted now and published in the programme laid upon the tables of Senators conform to all the precedents of the past except some changes which have been made in favor of the House of Representatives.

"It is complained that the committee of arrangements is composed only of representatives of the Senate and not of the House. We have had the precedents examined, and find that that has been the case always, for the simple reason that the Senate being a permanent body it is the only body in existence after 12 o'clock on the 4th of March. Therefore a committee of three members of the Senate has uniformly regulated the ceremonies.

"It has also been complained that a discrimination has been made against the members of the House of Representatives. So far from that being the case, the programme is much more considerate as to the members of the House of Representatives than any programme ever before adopted.

"I have had all the programmes hunted up. The one issued at the time Mr. Buchanan was inaugurated was the first that I witnessed after I was a member of either house of Congress. We went back to the inauguration ceremonies at the time of Mr. Polk's inauguration, and have followed since in that line. I shall read an extract from these proceedings, showing where the changes have been made in favor of the House of Representatives, and in no respect whatever discriminating against them.

"At the inauguration of President Polk, for example, on the 4th of March, 1845, the privilege of the floor of the Senate-chamber was given to 'Senators and others who, by the rules of the Senate, and the arrangement of the committee, are entitled to admission, as follows: The President-elect, the ex-Presidents, the Chief-Justice and associate justices of the Supreme Court, the diplomatic corps, district judges of the United States, heads of departments and bureaus at the seat of government, officers who by name have received the thanks of Congress for their gallantry and good conduct in the service of their country, or who have received medals by a vote of Congress, and any persons entitled to a seat on the floor of the Senate, including the Governor for the time being of any State or Territory of the Union, the ex-Governors of the several States, such gentlemen as have been heads of departments or members of either branch of Congress.'

"No other mention was made of gentlemen who had been members of the House of Representatives which had just expired by limitation. Nor was any mention made of the members-elect of the new House, yet to be organized.

"In the order of procession from the Senate-chamber to the eastern portico the Supreme Court led the way, followed by the President-elect, the ex-Presidents, the Senate, the diplomatic corps, the Mayors of Washington, Georgetown, and Alexandria, and then—'the other persons before admitted on the floor of the Senate.'

"'On reaching the front of the portico,' the programme goes on to state, 'the President-elect and Chief-Justice will take the seats provided for them. The ex-Presidents, the committee of arrangements, and associate justices of the Supreme Court, will occupy a position several feet in the rear of the President-elect. The Vice-President, Secretary, and members of the Senate will occupy parallel lines next in rear. The diplomatic corps will occupy the next position, and the space immediately in their rear is assigned to the late Speaker, Clerk, and ex-members of the Senate and House of Representatives.'

"It will be seen that according to the old formula the House of Representatives was not recognized in the proceedings as an existing body, it having expired before the ceremonies commenced, but they were recognized as persons who had been members of Congress. There has been a gradual change in favor of a more marked recognition of the House of Representatives, and now we have adopted a still more marked change in favor of the House. Here is the order in which the procession is to be formed on the 4th of March:

Members of the Senate.

The diplomatic corps.

Heads of departments.

The retired General of the Army, the Lieutenant-General of the Army, the Admiral of the Navy, and the officers of the Army and Navy who, by name, have received the thanks of Congress.

Members of the House of Representatives-elect, Governors and ex-Governors of States.

"It will be seen that in the programme forty years ago the heads of departments, all the heads of bureaus and various executive offices that were then in existence, together with the Governors and ex-Governors of the States, preceded the House of Representatives. But this has been gradually changed, and the House of Representatives is recognized as a constituent body, although it has ceased to exist.

"I hope, therefore, if anybody in either house of Congress or any one among the people of this country thinks that the Senate of the United States have sought in any way to make any discrimination, or cast any disparagement on the House of Representatives, either past or present, he will be disabused by this correction of the record."

Final Adjournment.—Just before the final adjournment of the Senate the Vice-President-elect, Thomas A. Hendricks, of Indiana, entered the Senate-chamber. The President *pro tempore* of the Senate, Mr. Edmunds, administered to him the oath of office, and then addressed the Senate as follows: "Senators, we now close another epoch in the course of the republic under the Constitution. The brief period of our national existence has, by the exertion of the co-ordinated forces of national and State systems, brought the experiment of free social and political government to an established and secure triumph.

"I think I may safely say for us all that we believe that the long years to come in the future of the republic will more and more increase the peace, liberty, order, and security of all the people of our country.

"But perhaps it may not be improper for me to say that, in view of our recent experience, it may be doubted whether Congress can congratulate itself on being the best example of a legislative body conducting its business with that deliberate and timely diligence which is the inseparable handmaid of wisdom and justice, as well in the making as in the administration of laws. It is, I think, an evil of large and growing proportions that measures of the greatest importance, requiring much time for proper examination and discussion in detail, are brought to our consideration so late that it is not possible to deal with them intelligently, and which we are tempted (over-tempted I fear) to enact into laws in the hope that fortune rather than time, study, and reflection will take care that the republic suffer no detriment.

"The Chair has heard with deep sensibility of the resolution you have kindly adopted concerning the administration of his duties, and he begs to express sincerely his gratitude for it. If, in the course of the execution of his duties, he has (as he sometimes may have done) wounded the feelings of any Senator or officer of the Senate, he can truly say that he has not intentionally given offense to any one; and in closing this session of the Senate he assures every Senator, whether retiring or continuing in public duty, that he wishes for him every friendly good wish, and hopes that he may long enjoy all the happiness that can be realized by citizen or Senator. He now declares the Senate adjourned without day."

At ten minutes to twelve o'clock, noon, on March 4, it was announced in the House that the business of the session had closed, and Mr. Carlisle, the Speaker, said: "Gentlemen of the House of Representatives: The work of the Forty-eighth Congress is now completed, and the time has come for the performance of my last official act as the presiding officer of this House. I should do violence to my own feelings and be guilty of the grossest ingratitude if I should declare a final adjournment without returning to you, individually and collectively, my sincere thanks for the complimentary resolution passed this morning. I thank you also, gentlemen, with equal warmth and sincerity, not only for the confidence reposed in me at the beginning of our labors here, but for the respect and courtesy which have characterized all your personal and official intercourse with me since that time.

"The membership of this House is so large, its business is so great, and the struggle on the floor for priority in the consideration of measures is so earnest, that without your cordial co-operation and support it would have been utterly impossible to conduct our proceedings in an orderly or regular manner. It is but simple justice to say that your support and co-operation have been promptly and cheerfully given in every emergency, and to that fact, more than to anything else, must be attributed whatever measure of success has attended my efforts to preserve order and facilitate the transaction of the public business. Very few, even among those who are best acquainted with our legislative history, have an adequate conception of the increased labors and responsibilities devolved upon Congress by the events of the last quarter of a century, and none who have not had actual experience can fully appreciate the difficulties attending the transaction of business in a body so large as this.

"In the First Congress the House of Representatives consisted of only sixty-seven members—less than the present membership of the Senate. Now there are three hundred and twenty-five, besides the delegates from the Territories. From the organization of the Government to the close of the Twenty-fifth Congress, a period of fifty years, there were introduced into the House, as shown by its records, 8,777 bills and joint resolutions, while during the two sessions of the present Congress 8,630 bills and joint resolutions have been introduced—almost as many as during that half-century. At present each one of our principal general appropriation bills embraces as much money as the whole amount of the net ordinary expenditures of the Government during the first nine or ten years of its existence, and the specific objects to be investigated and provided for in those bills have so increased that it has become a considerable task even to enumerate them.

"Although this House has passed a larger number of bills than any of its predecessors, except, perhaps, one or two which sat for a longer time, it is not at all strange, gentlemen, in view of the facts just mentioned, that it should be compelled to leave unfinished a very large percentage of the measures presented. It is evident that, unless some constitutional or legislative provision can be adopted which will relieve Congress from the consideration of all, or at least a large part, of the local and private measures which now occupy the time of the committees and fill the calendars of the two houses, the percentage of business left undisposed of at each adjournment must continue to increase from year to year. It is not reasonable to suppose that an alteration of the Constitution can be effected, but it is worthy of serious consideration whether a general law might not be enacted which would authorize the several executive departments and the courts of justice to hear and determine these matters under such rules and regulations as would amply protect the interests of the Government and at the same time secure to the citizen a more expeditious and appropriate remedy than is now afforded. If this shall be done, time and opportunity will be afforded here for the deliberate consideration of those great public questions which the Constitution has committed to the legislative department, and something might be done to promote the welfare of the whole people without neglecting the special interests of any.

"I congratulate you, gentlemen, upon the spirit of harmony and good feeling which has prevailed throughout your deliberations. It is true that wide differences of opinion have been developed and the largest liberty of debate has been exercised, but each member has honestly endeavored to respect and protect the rights and privileges of his associates, and I am sure that no personal animosities have been engendered that will survive the close of your official relations. We shall part to-day better friends than when we met, and hereafter, I trust, we will all recall with pleasure the fact that we were associated as members of the House in the Forty-eighth Congress.

"For my part I shall always consider myself indebted to you for the highest honor of my life, the honor of presiding over the deliberations of the American House of Representatives—a legislative body which, while it has always respected the just authority of the Government, has never failed to assert the rights of the people. When it ceases to do either, it will no longer be an honor to preside over it.

"Gentlemen, renewing my profound thanks for your assistance, for your forbearance, and for the expressions of esteem and confidence which you have just placed upon your record, and assuring each one of you of my best wishes for his success in every honorable aspiration, I now declare this House adjourned *sine die.*"

Bills passed.—Besides the measures heretofore specially noticed, the various appropriation bills and private bills, the following acts were passed:

To provide for the sale of the Sac and Fox Indian reservation in the States of Nebraska and Kansas, and for other purposes.

To adopt the "Revised International Regulations for preventing Collisions at Sea."

Authorizing and requiring the Secretary of War to deliver to the Eighth New York Heavy Artillery Association the regimental colors which belonged to said artillery, and which are now in the custody of the Secretary of War.

For the benefit of soldiers and sailors who have lost an arm at the shoulder-joint.

Providing for allotment of lands in severalty to the Indians residing upon the Umatilla reservation, in the State of Oregon, and granting patents therefor, and for other purposes.

To amend section 4434 of title 52 of the Revised Statutes of the United States, concerning commerce and navigation and the regulation of steam-vessels.

To authorize the Secretary of the Interior to ascertain the amounts due to citizens of the United States for supplies furnished to the Sioux or Dakota Indians of Minnesota subsequent to August, 1860, and prior to the massacre of August, 1862, and providing for the payment thereof.

Providing for the printing and distribution of the Descriptive Catalogue of Government Publications.

To provide for the issue of duplicate checks.

Authorizing the Secretary of War to adjust and settle the account for arms between the State of South Carolina and the Government of the United States.

For the relief of the Metropolitan police force of the District of Columbia.

For the protection of children in the District of Columbia, and for other purposes.

To authorize the Secretary of War to relinquish and turn over to the Interior Department certain parts of the Camp Douglas military reservation, in the Territory of Utah.

To authorize the Secretary of the Treasury to convey land in Providence, R. I., for highway purposes.

Authorizing the Superintendent of the Census to continue the work on the Tenth Census.

Appropriating $50,000 for the support of certain destitute Indians.

To release the reversionary right of the Government of the United States to certain lands in the city of Detroit and State of Michigan.

Regulating appeals from the Supreme Court of the

District of Columbia and the Supreme Courts of the several Territories.

Extending the jurisdiction of justices of the peace in Wyoming Territory.

Amending section 764 of the Revised Statutes.

To declare a forfeiture of lands granted to the Texas Pacific Railroad Company, and for other purposes.

To incorporate the Luther Statue Association, to erect and maintain a monument or statue in memory of Martin Luther in the District of Columbia.

To amend section 1889 of chapter 1, title 23, of the Revised Statutes of the United States, relative to general incorporation acts of Territories.

Detaching Grundy County, Tennessee, from the Southern District of East Tennessee, and attaching it to the Middle District of said State.

To authorize the appointment of a commission by the President of the United States to run and mark the boundary-lines between a portion of the Indian Territory and the State of Texas, in connection with a similar commission to be appointed by the State of Texas.

To provide for the appraisement and sale of lots in the town of Peru, Dubuque County, Iowa.

To empower the Secretary of War to establish, under certain conditions, a horse-railway upon and over the island of Rock Island, and the bridges erected by the United States connecting the cities of Davenport and Rock Island therewith.

To donate a cemetery site on the public lands to the city of Kirwin, in the State of Kansas.

Providing for the erection of a building to contain the records of the library and musuem of the Medical Department, United States Army.

Extending the time fixed for the joint commission appointed under the sundry civil act, approved July 7, 1884, to submit their report.

Authorizing the printing of certain naval and military reports.

To authorize the increase of the capital stock of the Commercial National Bank of Chicago.

To change the name of the Manufacturers' National Bank of New York to the Manufacturers' National Bank of Brooklyn, N. Y.

To provide for printing the annual reports of the Smithsonian Institution.

To authorize the construction of a bridge across the Mississippi river at Memphis, Tenn.

To authorize the construction of a bridge across the Saint Croix river at the most accessible point between Stillwater and Taylor's Falls, Minn.

To authorize the increase of the capital stock of the First National Bank of Larned, Kan., not to exceed $250,000.

Granting right of way to the Fremont, Elk Horn and Missouri Valley Railroad Company across the Fort Robinson military reservation, in the State of Nebraska.

To authorize suits for damages where death results from the wrongful act or neglect of any person or corporation in the District of Columbia.

To authorize the construction of bridges across the Mississippi river, one within the State of Minnesota and one between the States of Minnesota and Wisconsin.

To authorize the National Bank of Bloomington, Ill., to change its name to the First National Bank of Bloomington, Ill.

To give the assent of Congress to the construction of a railroad bridge by the East and Middle Tennessee Railroad Company over the Cumberland and Caney Fork rivers.

To change the name of the Slater National Bank of North Providence, R. I.

To authorize the increase of the capital stock of the First National Bank of Omaha, Neb.

Providing for printing additional copies of the sixth and seventh annual reports of the Director of the United States Geological Survey.

To authorize the printing of 50,000 copies of the Second Annual Report of the Bureau of Animal Industry for the year 1885.

To authorize the printing of 400,000 copies of the Annual Report of the Commissioner of Agriculture for the year 1885.

Providing for printing the sixth and seventh annual reports of the Director of the Bureau of Ethnology.

Providing for printing monograph 2 of the publications of the United States Geological Survey.

Various bills authorizing the erection of public buildings, the purchase of sites or an increase in appropriations for public buildings at Council Bluffs, Iowa; Clarksburg, W. Va.; Troy, N. Y.; Aberdeen, Miss.; La Crosse, Wis.; Wichita, Kan.; Port Townsend, Wash.; Auburn, N. Y.; Louisville, Ky.; Waco, Tex.; Augusta, Me.; Tyler, Tex.; Key West, Fla.; Springfield, Ill.; Richmond, Va.; Detroit, Mich.; New Bedford, Mass.; Sacramento, Cal.; Chattanooga, Tenn.; Fort Wayne, Ind.; Erie, Pa.

Special Session of the Senate.—A special session of the Senate began at noon, March 4, 1885. The main business of the session after the inauguration of the new President was executive, and consisted in action on his appointments, but there was a spirited discussion on the subject of railroad land grants, and more especially on the grant to the New Orleans, Baton Rouge, and Vicksburg line, commonly known as the Backbone Railroad. Some debate also occurred on the admission of Senator Blair, of New Hampshire, who had been appointed temporarily his own successor by the Governor of his State, the Legislature having failed to provide for the vacancy caused by the expiration of his term. The following is a list of the Senate of the Forty-ninth Congress at the meeting of the special session:

Thomas A. Hendricks, of Indiana, *President of the Senate.*

Alabama.
James L. Pugh,
John T. Morgan.

Arkansas.
Augustus H. Garland,
James K. Jones.

California.
John F. Miller,
Leland Stanford.

Colorado.
Thomas M. Bowen,
Henry M. Teller.

Connecticut.
Joseph R. Hawley,
Orville H. Platt.

Delaware.
Thomas Francis Bayard,
Eli Saulsbury.

Florida.
Wilkinson Call,
Charles W. Jones.

Georgia.
Joseph E. Brown,
Alfred H. Colquitt.

Illinois.
Shelby M. Cullom,
John A. Logan.

Indiana.
Benjamin Harrison,
Daniel W. Voorhees.

Iowa.
William B. Allison,
James F. Wilson.

Kansas.
John J. Ingalls,
Preston B. Plumb.

Kentucky.
James B. Beck,
J. C. S. Blackburn.

Louisiana.
Randall Lee-Gibson,
James J. Eustis.

Maine.
Eugene Hale,
William Pitt Frye.

Maryland.
Arthur P. Gorman,
Ephraim K. Wilson.

Massachusetts.
Henry L. Dawes,
George F. Hoar.

Michigan.
Omar D. Conger,
Thomas W. Palmer.

Minnesota.
Samuel J. R. McMillan,
Dwight M. Sabin.

Mississippi.
James Z. George,
Lucius Q. C. Lamar.

Missouri.

Francis M. Cockrell,
George G. Vest.

Nevada.

James G. Fair,
John P. Jones.

New Jersey.

William J. Sewell,
John R. McPherson.

North Carolina.

Matthew W. Ransom,
Zebulon B. Vance.

Oregon.

Joseph N. Dolph,
James H. Slater.

Rhode Island.

Nelson W. Aldrich,
Jonathan Chace.

Tennessee.

Howell E. Jackson,
Isham G. Harris.

Vermont.

Justin S. Morrill,
George F. Edmunds.

West Virginia.

Johnson N. Camden,
John E. Kenna.

Nebraska.

Charles H. Van Wyck,
Charles F. Manderson.

New Hampshire.

Austin F. Pike,
Henry W. Blair.

New York.

Warner Miller,
William M. Evarts.

Ohio.

John Sherman,
Henry B. Payne.

Pennsylvania.

J. D. Cameron,
John J. Mitchell.

South Carolina.

Matthew C. Butler,
Wade Hampton.

Texas.

Samuel Bell Maxey,
Richard Coke.

Virginia.

William Mahone,
Harrison H. Riddleberger.

Wisconsin.

Philetus Sawyer,
John C. Spooner.

Messrs. Bayard, Garland, and Lamar were appointed to Cabinet offices, and in place of the last named E. C. Walthall was sent as Senator from Mississippi before the close of the session.

On the organization of the Senate, March 4, the persons entitled to admission on the floor of the Senate-chamber having been admitted to the places reserved for them, the President, Hon. Grover Cleveland, of New York, entered the Senate-chamber, accompanied by the late President, Hon. Chester A. Arthur, and Mr. Sherman, Mr. Ransom, and Mr. Hawley, members of the committee of arrangements, and was escorted to a seat in front of the Secretary's desk, and the late President and the members of the committee were seated on his right and left. The Vice-President then announced that the Sergeant-at-Arms would execute the order of the Senate relative to the inaugural ceremonies of the President of the United States, and those in the Senate-chamber proceeded to the platform on the central portico of the Capitol. There President Cleveland delivered the following inaugural address:

Fellow-Citizens: In the presence of this vast assemblage of my countrymen I am about to supplement and seal by the oath which I shall take the manifestation of the will of a great and free people. In the exercise of their power and right of self-government they have committed to one of their fellow-citizens a supreme and sacred trust; and he here consecrates himself to their service.

This impressive ceremony adds little to the solemn sense of responsibility with which I contemplate the duty I owe to all the people of the land; nothing can relieve me from anxiety lest by any act of mine their interests may suffer, and nothing is needed to strengthen my resolution to engage every faculty and effort in the promotion of their welfare.

Amid the din of party strife the people's choice was made; but its attendant circumstances have demonstrated anew the strength and safety of a government by the people. In each succeeding year it more clearly appears that our democratic principle needs no apology, and that in its fearless and faithful application is to be found the surest guarantee of good government.

But the best results in the operation of a government, wherein every citizen has a share, largely depend upon a proper limitation of purely partisan zeal and effort, and a correct appreciation of the time when the heat of the partisan should be merged in the patriotism of the citizen.

To-day the executive branch of the Government is transferred to new keeping. But this is still the Government of all the people, and it should be none the less an object of their affectionate solicitude. At this hour the animosities of political strife, the bitterness of partisan defeat, and the exultation of partisan triumph, should be supplanted by an ungrudging acquiescence in the popular will, and a sober, conscientious concern for the general weal. Moreover, if, from this hour, we cheerfully and honestly abandon all sectional prejudice and distrust, and determine, with manly confidence in one another, to work out harmoniously the achievements of our national destiny, we shall deserve to realize all the benefits which our happy form of government can bestow.

On this auspicious occasion we may well renew the pledge of our devotion to the Constitution, which, launched by the founders of the republic, and consecrated by their prayers and patriotic devotion, has for almost a century borne the hopes and the aspirations of a great people through prosperity and peace, and through the shock of foreign conflicts and the perils of domestic strife and vicissitudes.

By the Father of his Country our Constitution was commended for adoption as "the result of a spirit of amity and mutual concession." In that same spirit it should be administered, in order to promote the lasting welfare of the country, and to secure the full measure of its priceless benefits to us and to those who will succeed to the blessings of our national life. The large variety of diverse and competing interests subject to Federal control, persistently seeking the recognition of their claims, need give us no fear that "the greatest good to the greatest number" will fail to be accomplished if in the halls of national legislation that spirit of amity and mutual concession shall prevail in which the Constitution had its birth. If this involves the surrender or postponement of private interests and the abandonment of local advantages, compensation will be found in the assurance that thus the common interest is subserved, and the general welfare advanced.

In the discharge of my official duty I shall endeavor to be guided by a just and unstrained construction of the Constitution, a careful observance of the distinction between the powers granted to the Federal Government and those reserved to the State or to the people, and by a cautious appreciation of those functions which, by the Constitution and laws, have been especially assigned to the executive branch of the Government.

But he who takes the oath to-day to preserve, protect, and defend the Constitution of the United States only assumes the solemn obligation which every patriotic citizen, on the farm, in the workshop, in the busy marts of trade, and everywhere, should share with him. The Constitution which prescribes his oath, my countrymen, is yours; the Government you have chosen him to administer for a time is yours; the suffrage which executes the will of freemen is yours; the laws and the entire scheme of our civil rule, from the town-meeting to the State Capitols and the national Capitol, is yours. Your every voter, as surely as your Chief Magistrate, under the same high sanction, though in a different sphere, exercises a public trust. Nor is this all. Every citizen owes to the country a vigilant watch and close scrutiny of its public servants, and a fair and reasonable estimate of their fidelity and usefulness. Thus is the people's will impressed upon the whole framework of our civil polity—municipal, State, and Federal—and this is the price of our liberty and the inspiration of our faith in the republic.

It is the duty of those serving the people in public place to closely limit public expenditures to the actual needs of the Government economically administered, because this bounds the right of the Government to exact tribute from the earnings of labor or the property of the citizen, and because public extravagance begets extravagance among the people. We should never be ashamed of the simplicity and prudential economies which are best suited to the operation of a republican form of government, and most compatible with the mission of the American people. Those who are selected for a limited time to manage public affairs are still of the people, and may do much by their example to encourage, consistently with the dignity of their official functions, that plain way of life which among their fellow-citizens aids integrity and promotes thrift and prosperity.

The genius of our institutions, the needs of our people in their home-life, and the attention which is demanded for the settlement and development of the resources of our vast territory, dictate the scrupulous avoidance of any departure from that foreign policy commended by the history, the traditions, and the prosperity of our republic. It is the policy of independence, favored by our position and defended by our known love of justice and by our power. It is the policy of peace suitable to our interests. It is the policy of neutrality, rejecting any share in foreign broils and ambitions upon other continents, and repelling their intrusion here. It is the policy of Monroe and of Washington and Jefferson—"Peace, commerce, and honest friendship with all nations; entangling alliance with none."

A due regard for the interests and prosperity of all the people demand that our finances shall be established upon such a sound and sensible basis as shall secure the safety and confidence of business interests, and make the wage of labor sure and steady; and that our system of revenue shall be so adjusted as to relieve the people of unnecessary taxation, having a due regard to the interests of capital invested and working-men employed in American industries, and preventing the accumulation of a surplus in the Treasury to tempt extravagance and waste. Care for the property of the nation, and for the needs of future settlers, require that the public domain should be protected from purloining schemes and unlawful occupation.

The conscience of the people demands that the Indians, within our boundaries, shall be fairly and honestly treated as wards of the Government, and their education and civilization promoted, with a view to their ultimate citizenship; and that polygamy in the Territories, destructive of the family relation, and offensive to the moral sense of the civilized world, shall be repressed. The laws should be rigidly enforced which prohibit the immigration of a servile class to compete with American labor, with no intention of acquiring citizenship, and bringing with them and retaining habits and customs repugnant to our civilization.

The people demand reform in the administration of the Government and the application of business principles to public affairs. As a means to this end civil-service reform should be in good faith enforced. Our citizens have the right to protection from the incompetency of public employés who hold their places solely as the reward of partisan service, and from the corrupting influence of those who promise, and the vicious methods of those who expect, such rewards. And those who worthily seek public employment have the right to insist that merit and competency shall be recognized instead of party subserviency, or the surrender of honest political belief.

In the administration of a government pledged to do equal and exact justice to all men, there should be no pretext for anxiety touching the protection of the freedmen in their rights, or their security in the enjoyment of their privileges under the Constitution and its amendments. All discussion as to their fitness for the place accorded to them as American citizens is idle and unprofitable, except as it suggests the necessity for their improvement. The fact that they are citizens entitles them to all the rights due to that relation, and charges them with all its duties, obligations, and responsibilities.

These topics, and the constant and ever-varying wants of an active and enterprising population, may well receive the attention and the patriotic endeavor of all who make and execute the Federal law. Our duties are practical, and call for industrious application, an intelligent perception of the claims of public office, and, above all, a firm determination, by united action, to secure to all the people of the land the full benefits of the best form of government ever vouchsafed to man. And let us not trust to human effort alone; but, humbly acknowledging the power and goodness of Almighty God, who presides over the destiny of nations, and who has at all times been revealed in our country's history, let us invoke his aid and his blessing upon our labors.

CONNECTICUT. State Government. — The following were the State officers during the year: Governor, Henry B. Harrison, Republican; Lieutenant-Governor, Lorin A. Cooke; Secretary of State, Charles A. Russell; Treasurer, Valentine B. Chamberlain; Comptroller, Luzerne J. Munson. Judiciary, Supreme Court: Chief-Justice, John D. Park; Associate Justices, Elisha Carpenter, Dwight W. Pardee, Dwight Loomis, and Miles T. Granger.

Legislative Session.—The Legislature met on January 7 and adjourned April 23. The following is a summary of the work of the session, so far as of general interest:

CONSTITUTIONAL AMENDMENTS.

Passed.—That each Legislature may provide transportation for its members between their homes and Hartford. The object is to do away with the use of free railroad passes by members.

Rejected.—That plurality of votes shall elect State officers.

A resolution for a constitutional convention in September, 1885, was also rejected.

STATUTES.

That in civil actions the court may admit hitherto inadmissible evidence, or reject it.

That any ward of legal age for choosing a guardian, may choose a guardian of the person but not property, with approval of the Probate Court.

Establishing a town court in Derby.

That where a divorce suit is contested, it may be taken up at any time, instead of waiting ninety days after return day, as with uncontested cases.

Compiling the probate laws.

That the statutes be revised.

That in all towns triplicate election returns of State elections shall be made, one to be sent within two days to the Secretary of State, another within ten days, and the third deposited with the town clerk.

That in town meetings male citizens may vote if residing in the State one year, in town six months, duly admitted as electors, having freehold estate $300, or personal $150.

Punishing deception and fraud in causing any person to vote a ticket he did not intend to vote.

That non-partisan commissions shall be elected by the people instead of by the aldermen in New Haven.

Authorizing the New Haven and Derby road to issue $300,000 bonds to take up old bonds.

The "short haul" bill, to prevent discrimination in freight rates.

That agents of non-resident insurance companies must be licensed.

Placing non-resident assessment companies under control of the State Insurance Department.

Exempting from tax $1,000 of estate of pensioned widows or mothers of soldiers or sailors.

Authorizing the issue of $1,740,000 of State bonds to take up 6 per cent. bonds maturing this year.

Providing compulsory education for children between eight and sixteen in the public schools, unless otherwise instructed — children over fourteen may labor at home or elsewhere.

That every town may establish evening schools and receive allowance from the school fund at $1.50 per scholar.

That in factories where workmen forfeit wages for leaving without notice, they may recover a like amount if discharged without like notice, except for incapacity, misconduct, or "general suspension of labor."

Creating a Bureau of Labor Statistics, with commissioner and clerk.

That cities and boroughs may regulate plumbing and house-drainage.

That all kerosene shall be tested and the packages stamped.

Regulating the sale and use of dynamite and like compounds.

Punishing the sale or giving away of obscene and immoral picture-papers, "blood-and-thunder novels," etc.

That agricultural societies shall forfeit the State aid if liquor-selling, "wheels," pools, etc., are allowed on the grounds.

That when animals are infected or supposed to be, and are quarantined, owners shall be compensated for actual loss.

Changing the tree-planting law of 1881 so as to give ten cents a year bounty for each tree planted and cultivated on the highway for three years.

Authorizing the Fish Commissioners to determine the water boundaries between Connecticut and Rhode Island.

That the State fiscal year shall end June 30, and all State reports shall be printed before November 1.

The following are the chief appropriations:

Insane Hospital, Middletown	$50,000
Supplying deficiency in school fund	14,000
Military	100,000
Judicial	239,000
Humane and reform	137,000
Education	264,000
Legislative	96,755
Agriculture	20,900
Executive	28,700
Sundry civil	131,178
Contingencies	10,000

Political.—On November 3 one half of the Senate and the entire House of Representatives were chosen. The Legislature of 1886 will consist of 13 Republicans and 11 Democrats in the Senate, and in the House 130 Republicans, 117 Democrats, and 2 Independents.

Orville H. Platt, Republican, was re-elected United States Senator.

Finance.—On Oct. 1, bonds of the State amounting to $1,741,100, bearing interest at 6 per cent., became payable. To provide for their payment the Treasurer issued, and sold at a premium of about four fifths of 1 per cent., new bonds amounting to $1,740,000, payable in twenty-five years, bearing interest at the rate of 3 per cent. The interest on the funded debt was thereby reduced to the extent of $52,200 per annum. On Dec. 1 the funded debt (exclusive of $8,100 of matured bonds not presented) amounted to $4,271,000. The balance of cash in the treasury belonging to the civil list was $777,529.07. The total resources of the treasury, during the year ending Nov. 30, amounted to $4,155,765.36.

Education. — The census of January, 1885, showed the number of children between four and sixteen years old to be 151,069, 92 per cent. of whom attended school during the year ending Aug. 31, 1885, namely, 125,718 in public schools and 14,480 in private schools. The whole expense of the public schools (exclusive of the Normal School) during the same year was $1,852,221.45. On Nov. 30 the capital of the school fund was $2,028,123.74. For the year ending on that day its income was $119,680.05, and its disbursements $130,580.18. The number of pupils in the Normal School, Nov. 30, was 170. The expenses of the institution for the year were $19,845.

National Guard.—The National Guard, numbering 2,313 officers and men, maintains a high standard of discipline. During the year its condition was improved by the disbanding of two inefficient companies, and the organization, in Stamford, of a remarkably good one. The armories at Bridgeport and New London have been finished. The ordinary expenses of maintaining the force during the year ending Nov. 30 were $82,022.25, being $24,396.62 less than for 1884. The military commutation-tax will exceed $101,000 for the year.

State Institutions.—In May the center building and north wing of the addition to the Hospital for the Insane were finished. A south wing of the same building will soon be completed. During the year a house was built for the superintendent. On Nov. 30 the number of patients in the hospital was 1,071, an increase of 148 in a year.

The number of boys in the State Reform School, on Nov. 30, was 428, and the number discharged during the year was 198.

The Industrial School for girls had under its charge, Dec. 1, 230 girls.

Banks.—The number of savings-banks in the State is 84. The amount of their deposits on Oct. 1 was $92,481,525.43, an increase of $1,866,802.54 during the year; the number of depositors, 256,097, an increase of 3,852.

Insurance.—The number of stock fire-insurance companies organized under the State laws is 10, with paid-up capital amounting to $10,801,500; gross assets, $24,040,193; and surplus above all liabilities, $5,967,556. Number of mutual fire-insurance companies, 17. Amount of their assets, $1,195,297; surplus above all liabilities, $893,966. Number of life-insurance companies, nine. Amount of gross receipts, $110,839,326; liabilities, $99,321,018.

Railroads.—There are in the State 22 railroads. The number of men employed exceeds 11,000. The amount of capital stock is $58,578,477, of which amount stockholders living in Connecticut hold $17,719,377. The number of passengers carried during the year ending Sept. 30 was 17,430,921. The total length of the roads is 974 miles, of double tracks 174 miles, and of sidings 257 miles.

Paupers.—On this subject the Governor says: "It seems clear that the 'contract system,' so called, which prevails in a considerable number of towns, furnishes constant opportunity and temptation for great abuses, and that some substitute for it ought, if possible, to be found. I recommend careful investigation of this whole matter, and the enactment of such legislation as may be found necessary to prevent all inhumanity in our treatment of the poor."

CONTEMPT OF LEGISLATIVE AUTHORITY. On Oct. 6, 1885, the New York Court of Appeals, the State court of last resort, rendered an opinion of wide interest and importance, holding that either branch of the Legislature has power to require a witness to testify before a legislative investigating committee, and to punish him for contempt if he refuses to testify. Early in January, 1884, the Senate at Albany adopted a resolution calling for the appointment of a special committee to investigate charges that had been publicly made of frauds and irregularities in the Department of Public Works in the city of New York. Pursuant to this authority, the committee proceeded to New York and began the investigation. Among other witnesses William McDonald was summoned to appear and testify. After being examined at considerable length, he declined to answer certain questions put to him by the committee, on the ground that they were improper and impertinent, in that they were inquiries into his private business apart from his transactions with the Department of Public Works. He subsequently refused to submit to further examination unless he could be attended by his counsel before the committee, and be allowed to act on the advice of such counsel in the matter of answering questions. The committee denied his claimed right to appear by counsel, and insisted that he must answer the questions put to him. This the witness refused to do. He was thereupon reported to the Senate for contempt of its authority. He was arraigned before the bar of the Senate, when he answered that he was willing to appear before the committee and answer all proper and material questions if allowed the advice and assistance of counsel, but not otherwise. The Senate now adjudged him guilty of contempt and ordered his imprisonment in the Albany County Jail until the adjournment of the Legislature, unless sooner discharged by order of the Senate. He was accordingly imprisoned.

Soon afterward his case was brought before Judge Westbrook, of the Supreme Court, in *habeas corpus* proceedings. That judge rendered an elaborate opinion, maintaining that the Senate was not vested with the power which it had exercised, but, in view of the fact that there was no little judicial authority in support of the Senate's claim, he declined while sitting as a single judge to assume the responsibility of ordering the discharge of the prisoner. An appeal was thereupon taken to the General Term of the Supreme Court. That tribunal held: 1. That the questions put to the witness were immaterial, and that he was not bound to answer them. 2. That the witness had a right to have the advice of counsel, in an orderly manner, and that, when this was refused, he was justified in withdrawing from the committee. 3. That, except when engaged in judicial functions authorized by the Constitution, neither branch of the Legislature has any power to punish for contempt for refusal to answer questions. It accordingly ordered the discharge of McDonald. The Court pointed out that the specific questions which the witness was punished for refusing to answer were the following:

> Do you keep books of this coal business?
>
> Do you carry on your coal business any differently, or upon any different system, from what you do your business with the city?
>
> How much coal do you keep at your dock?
>
> How much business do you do in the way of coal? I mean all the time.
>
> Give me the name of somebody else besides Robert Gubbings that was breaking stone there for you.
>
> Who are they (from whom you get chips) except the Tompkins Cove people?

Concerning these inquiries Justice Learned, in the opinion of the General Term, said: "As to the questions respecting the business of the witness, we can not see the least pertinency to the subject of investigation. There does not appear to be anything connecting the coal business with the alleged frauds and irregularities. The questions were impertinent, should not have been asked, and need not have been answered."

The case was now carried to the Court of Appeals. Here the power exercised by the Senate was affirmed. The main question, the Court explained, was as to the constitutionality of the State statute in issue. This expressly gives to each house "the power to punish as a contempt, and by imprisonment, a breach of its privileges or of the privileges of its members" in certain enumerated cases, one of which is "that of refusing to attend or be examined as a witness either before the House or by a committee to take testimony in legislative proceedings." In behalf of the prisoner it was contended that the Legislature had no constitutional power to pass the statute, and in support of this view the case of Kilbourn *vs.* Thompson was cited, in which the United States Supreme Court denied to Congress the power to punish for contempt except in certain cases. (For this opinion, see "Annual Cyclopædia" for 1882, page 698.) The Court of Appeals remarked that that case did not arise under any act of Congress authorizing either house to punish contumacious witnesses, for there was no such act. The question was whether a general power to punish contempts was inherent in Congress, as necessary to the exercise of its functions independent of any statute. "The case now before us," the Court proceeded, "is entirely different. It arises under a statute enacted by the Legislature of New York. The inquiry is, not whether the power to enact such a law is to be found in the State Constitution, but whether such legislation is prohibited or restrained by that instrument, or by the Constitution of the United States. Except as thus limited, the State Legislature possesses the whole legislative power of the State." The main ground on which the statute was assailed was that it confers upon each of the two houses a power that is in its nature judicial, to hear, adjudge, and condemn; that no such power can be conferred upon the Legislature itself, or either branch of it; that judicial power is vested only in the courts, and can be rightly exercised only by them. To this the Court replied that notwithstanding the general division of governmental powers into legislative, executive, and judicial, certain powers in their nature judicial are by the express terms of the State Constitution vested in the Legislature.

The power of impeachment, for example, is vested in the Assembly. Each house is made the judge of the qualifications and election of its own members; other instances might be cited. "I think it would be going too far," says Judge Rapallo, who delivered the opinion of the Court of Appeals, "to say that every statute is necessarily void which involves action on the part of either house partaking in any degree of a judicial character, if not expressly authorized by the Constitution. Where the statute relates to the proceedings of the legislative body itself and is necessary or appropriate to enable it to perform its constitutional functions, I can not regard it as such an invasion of the province of the judiciary as should bring it within any implied prohibition of the State Constitution. That instrument contains no express provision declaring any of the privileges of the members of either house, except that for any speech or debate in either house the members shall not be questioned in any other place. Even the privilege of exemption from arrest during the sessions is not declared. No power to keep order or to punish members or others for disorderly conduct, or to expel a member, is contained in the State Constitution, as it is in the Constitution of the United States. All these matters are in this State left under the regulations of the statutes, and there is not even express authority to enact such statutes. The necessity of the powers mentioned is apparent and is conceded in all the authorities, and it is equally apparent that statutes upon the subject must authorize some action partaking of a judicial character. If that feature is a fatal objection, it annuls all the statutory provisions in which it appears." The opinion then proceeds as follows.

> The power of obtaining information for the purpose of framing laws to meet supposed or apprehended evils is one which has from time immemorial been deemed necessary and has been exercised by legislative bodies. In this State it does not rest upon precedent merely, but is expressly conferred by statutes, which proves that every chairman of a committee either of the Senate or the Assembly, or of any joint committee, is authorized to administer oaths to witnesses, and, when the committee is by the terms of the resolution appointing it authorized to send for persons and papers, the chairman has the power, under the direction of the committee, to issue compulsory process for the attendance of any witness within the State whom the committee may wish to examine, and to issue commissions for the examination of witnesses out of the State. To subject a witness to punishment as for a contempt, the testimony sought must, as has already been shown, relate to a legislative proceeding.
>
> It is difficult to conceive any constitutional objection which can be raised to the provision authorizing legislative committees to take testimony and to summon witnesses. In many cases it may be indispensable to intelligent and effectual legislation to ascertain the facts which are claimed to give rise to the necessity for such legislation and the remedy required, and irrespective of the question whether, in the absence of a statute to that effect, either house would have the power to imprison a recusant witness. I can not yield to the claim that a statute authorizing it to enforce its process in that manner is in excess of the legislative power. To await the slow process of indictment and prosecution for a misdemeanor might prove quite ineffectual, and necessary legislation might be obstructed and perhaps defeated if the legislative body had no other and more summary means of enforcing its right to obtain the required information. That the power may be abused is no ground for denying its existence. It is a limited power and should be kept within its proper bounds, and when these are exceeded a jurisdictional question is presented which is cognizable in the courts. My conclusion is that subdivision 4 of section 13, 1 Revised Statutes, is constitutional and valid.
>
> Throughout this Union the practice of legislative bodies, and in this State the statutes existing at the time the present Constitution was adopted, and whose validity has never before been questioned by our courts, afford strong arguments in favor of the recognition of the right of either house to compel the attendance of witnesses for legislative purposes, as one which has been generally conceded to be an appropriate adjunct to the power of legislation, and one which, to say the least, the State Legislature has constitutional authority to regulate and enforce by statute.

Having laid down these general principles, the Court went on to consider their application to the case before it. Two points were presented for consideration: First, whether the investigation was one with legitimate legislative ends in view; second, whether the specific questions (given above) which the witness refused to answer were pertinent and proper. The Court disposed of the second point by saying that "we do not deem it necessary to discuss it, because the contempt charged consisted, not merely of the witness's refusal to answer those questions, but of his refusing to be further examined or to remain in attendance upon the committee, though informed that his examination was not concluded and warned not to leave, and that if he left he did so at his own peril. His refusal to be further examined or to remain in attendance was placed upon the ground that the committee refused to recognize his right to be attended by counsel and act under his advice in answering questions, but we are of opinion that he had no constitutional or legal right to the aid of counsel on such examination. The constitutional provision on that subject is that 'in any trial in any court whatever the party accused shall be allowed to appear and defend, in person and with counsel, as in civil actions.' This provision has been very liberally construed, and held to apply to trials before any authority having jurisdiction to try. In the case of The People *ex rel.* Nichols *vs.* the Mayor This court held that a police commissioner, appearing before the Mayor of the city of New York to show cause why he should not be removed for cause pursuant to the statute, was entitled to be defended by counsel. But here the relator was not on trial, nor was he a party, but he was a mere witness called upon to testify in relation to charges against another person, and there was no trial pending against any one. As well might a witness examined before a grand jury conducting the investigation of a charge against another person with a view to his indictment claim the right to be attended by counsel and answer under his advice. We do not think that a mere witness has this right."

In considering whether the investigation was within the scope of legislative functions, the Court said:

> We are finally brought to the consideration of the important and more doubtful question whether the investigation which the committee was conducting was a legislative proceeding which the House was authorized to institute. This is a jurisdictional question, for the statute applies only to such proceedings, and if the House had any authority independently of the statute that must depend upon the question whether the testimony was sought for the purpose of aiding it in the performance of any of its constitutional functions. An investigation instituted for the mere sake of investigating or for political purposes, not connected with intended legislation or with any of the other matters upon which the House could act, but merely intended to subject a party or body investigated to public animadversion, or to vindicate him or it from unjust aspersions where the Legislature had no power to put him or it on trial for the supposed offenses, and no legislation was contemplated but the proceeding must necessarily end with the investigation, would not, in our judgment, be a legislative proceeding or give to either house jurisdiction to compel the attendance of witnesses or punish them for refusing to attend. Where public institutions under the control of the State are ordered to be investigated it is generally with the view of some legislative action respecting them, and the same may be said in respect to public officers. In the present case the language of the resolution was as follows:
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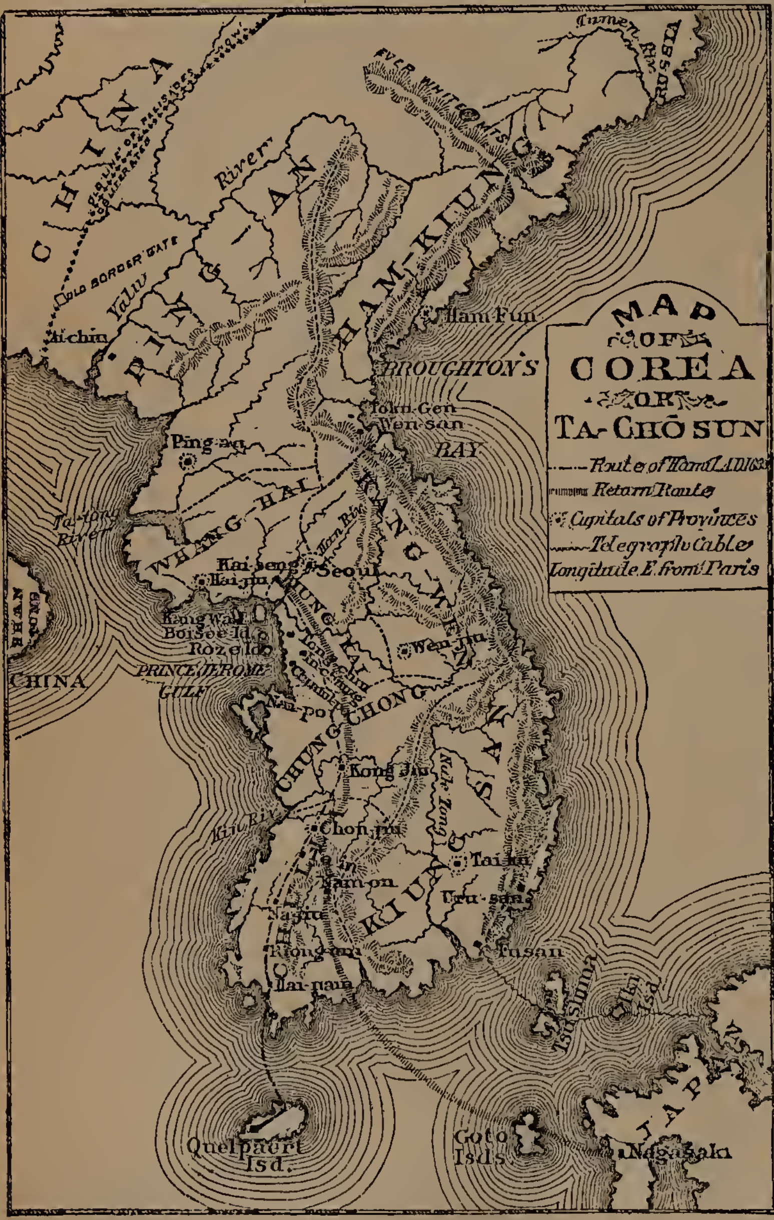
> "Whereas grave charges of fraud and irregularities have been made from time to time by the public press and recently by the Union League Club of the city of New York against Hubert O. Thompson, Commissioner of Public Works in the city of New York; and whereas these charges have, in the opinion of many persons, never been satisfactorily explained or fairly refuted; and whereas it is of vital importance to all the tax-payers of the State that the heads of all public departments should be beyond reproach; therefore be it
>
> "*Resolved*, That the standing Committee on the Affairs of Cities of the Senate be and it hereby is directed and empowered to investigate the Department of Public Works in the city of New York, with power to send for persons and papers, and said committee is hereby authorized to employ a stenographer and such counsel and accountants as it may deem necessary for the thorough discharge of the duties hereby imposed. Such committee to report the result of such investigation, and its recommendations concerning the same, to the Senate on or before the 15th day of April next."
>
> If the resolution had shown upon its face that the only purpose of the investigation was to satisfy the tax-payers of the State as to the truth of the charges, or to relieve the department from reproach, and no further action was contemplated or could be had in the matter by the Legislature, the case would fall within the decision in Kilbourn *vs.* Thompson. But such was not the case. The Department of Public Works was created and its duties prescribed by a statute of the State, and if the system was so defective as to admit of frauds or irregularities which could be guarded against by further statutory regulations, it was in the power of the Legislature to enact them. That some action of this nature was in contemplation is indicated by the provision in the resolution requiring the committee to report the result of its investigation and its recommendations concerning the same. The Legislature had no power to remove the Commissioner or any officer of the department, and the only action the committee could recommend would be appropriate legislation to prevent a recurrence of the frauds or irregularities, if they were found to exist, and to be of such a nature that they could be prevented or rendered more difficult by legislation. We are bound to presume that the action of the legislative body was with a legitimate object, if it is capable of being so construed, and we have no right to assume that the contrary was intended. The same principle which renders it the duty of the courts to hold legislative action illegal when it unduly encroaches upon the province of the judiciary forbids interference by the latter with the action of legislative bodies or the exercise of their discretion in matters within the range of their constitutional powers.

In accordance with these views, the Court reversed the opinion of the General Term below, which held the commitment illegal and unwarranted. But McDonald was not ordered to prison again, or to make further answer, for the reason that the term of his imprisonment had ended with the session of the Legislature.

CONWAY, HUGH. See FARGUS, FREDERICK J.

COREA, a kingdom in eastern Asia, lying between Russia and the Eastern Sea, and between Japan and China. It was known to the Arabs, who traded and settled there in the ninth century, calling it Sila, after Sin-lo, the chief of the three peninsular states. The natives call their country Chō-sen (morning calm), the full name being Tai (great), or Ta (all, entire) Chosen. The names borne by the Coreans indicate the epochs of their history. They are, old Chō-sen (B. C. 1122–A. D. 9), San-han, or the Three Kingdoms (A. D. 9–960), Korai (domain of Ko), whence our "Corea" (960–1392), and modern Chō-sen, founded in 1392. The ancestor of Confucius, Ki-tse, on the fall of the Shang dynasty in China in 1122 B. C., emigrated to the northeast and founded Chō-sen, a kingdom which lay partly within the peninsula. The Coreans reverence him as their first ancestor. Near the Christian era, this Chō-sen was annexed to China. Within the peninsula, the independent tribes developed into three kingdoms which, becoming vassals of China, and her pupils in civilization, transmitted to Japan emigrants, Buddhist missionaries, arts, and sciences. After many wars with either country, and among the three states themselves, political unity was given to the peninsula by King Wu, who united the San-han into one state, named Korai. He divided the country into eight provinces, fixing his capital at Sunto, a few miles northeast of Séoul. During the twelfth and thirteenth centuries the Mongols occupied Corea. On their fall, and the rise of the Ming dynasty in China, the Coreans threw off the Mongol yoke, restored their old name, Chō-sen, and the modern order of things, and established their *séoul*, or capital, on Han river. The Japanese invasion of 1592–1597, and that of the Mantchoos in 1627, greatly impoverished the nation. From the effects of these wars Corea has not yet recovered, and Chō-sen is one of the poorest of countries.



Area and Population.—The peninsula, which is 600 miles long, varies from 400 to 120 miles in breadth, and has an area of nearly 80,000 square miles, or twice the size of Ohio, with a coast-line of 1,740 miles. The official enumeration of houses, made thirty-three years ago, as noted by Dallet, gave the number at 1,700,000, and that of the people at 7,000,000; and a Japanese writer in Séoul says that according to a census made in 1881 the population is 6,840,000. Beyond the Tumen, in Russia, there are at least 10,000 Coreans, 2,000 of whom live at or near Vladivostok.

Industry and Finance.—The revenue of the King or Government is derived entirely from the land-tax, and there are comparatively few traces of trade or industry such as are seen in Japan or China. Cereals are largely used as money. The unit of cultivable land for revenue purposes is the *kyel*, the equivalent of which in our superficial measure can not be stated, because it is the amount of land capable of producing one hundred sheaves of rice. This crop varies in value according to the fertility of the season, but averages a half-bushel of clean white grain. A *kyel* or *wek* of land is worth 100,000 *sapek* or "cash," which is equivalent to about twenty dollars. The estimated total yield of the country is 468,360 *kyel* of rice-land and 309,807 *kyel* of other cereals, or an average annual crop worth $15,562,260. The land-tax, payable at option in money or in kind, is 750 Corean taels, or *nyang* (worth twenty cents), or $150 per 100 *kyel* for rice-land, and about 500 *nyang*, or $100 per *kyel*, of other cereals. The annual governmental revenue of Corea is thus seen to be only about $950,000, or less than a million dollars—a sure proof of the great poverty of the country, acknowledged by all visitors to the peninsula. A more equitable system of taxation, better government, and the development of the undoubted natural resources, will, as in the case of Japan, change all this.

Physical Geography.—The peninsula consists of a great chain of mountains, running from north to south, which makes eastern Corea a ridge and western Corea a slope. Fronting the Sea of Japan, from the Tumen river to Fusan, is a barrier of precipitous cliffs or steep inclines, with a narrow margin of sea-beach. Only three provinces lie on the east coast, and but few cities, harbors, or islands, and most of the river-sources are in the mountain-tops of this portion, but on the side toward China. The interior is broken up by countless smaller chains and spurs, making the surface one of continual undulations traversed by river-basins and valleys, with few or no plains of notable size. On the west coast lie five provinces, many cities, harbors, and river-mouths, besides that vast number of islands constituting "the Corean Archipelago." The chief rivers determine the political divisions of the kingdom, the eight provinces of which are so many river-basins. The chief rivers are the Tumen and the Yalu on the north, dividing Corea from Russia and China; the Han, "*the* river" by excellence, is the largest, and on it the capital is situated. Traversing the whole breadth of the peninsula, its channel is conspicuous even in the sea, and its spring floods are often very destructive. The Tatong, Kim, and Nak-tong are important and historic streams. Few are navigable to any considerable distance, but French war-vessels have anchored in the Han, off Séoul, and Chinese gunboats have ascended the Yalu a distance of twenty-five miles. Corea has "scientific frontiers," and her boundaries are wholly of mountain, river, and sea. The bodies of water on either side—the Sea of Japan, Yellow Sea, and Gulf of Pechili—are quite shallow, but full of the fish that forms so large a portion of the national diet. The climate is one of great variety; the northern parts, in which are many mountains and much ice and snow, being like British America, and the southern reminding one of the Carolinas. With a heavy rain and snow fall, and the extremes of summer and winter temperature, the fauna and flora partake of the characteristics of both glacial and sub-tropical countries.

Foreign Influence. — Christianity was introduced into Corea in 1777 by a native who had visited the Jesuits in Peking, and returned with Christian literature, and the plain of Nai-po is called "the cradle of the faith." In 1794 the first Roman Catholic Chinese, and in 1835 the first French priest, crossed the ice of the Yalu river in disguise. So successful was the propagation that in 1860, the year in which, by Count Ignatieff's diplomacy with China, the boundaries of Russia touched those of Corea, the converts numbered 20,000, led by twelve foreigners. In 1864 the direct royal line founded in 1392 came to an end, and a lad twelve years old was named heir, his father, a court noble, being made Tai-wen Kun, or regent. Under his instigation, in 1866, persecutions broke out; nine French priests were seized, and, with a number of native Christians, beheaded. Admiral Roze, with a French force of seven vessels, sailed into the Han river to avenge their death. With 660 marines he burned Kang-wa, but, meeting with reverses at a fortified monastery, came away ingloriously to find his hasty action disapproved at Paris. Stories of golden coffins in costly mausoleums in Corea had long attracted the cupidity of adventurers, and during this same year a party of Americans and British ascended the Ping-Yang river in August on the armed schooner General Sherman, but near the city in which rumor located the royal tombs they were all slain by the infuriated natives. In April, 1867, a refugee French priest piloted a party of grave-robbers to Nai-po to steal the bones of the regent's ancestors, to hold them to ransom. Though foiled by heavy masonry, the party got off with the loss of only two men.

Relations with the United States.—Two American officers, Shufeldt and Febiger, in the Wachusett and Shenandoah, visited the coast, but obtained no satisfaction. Rear-Admiral John Rodgers, in 1871, entered the Han river, landed 750 men, and shelled the forts from the gunboats. In forty-eight hours the naval battalion captured 5 forts, 50 flags, and 480 pieces of artillery. Diplomatically the mission was a failure, but, from a naval view, a superb success, which so impressed the Coreans as to incline them to treat with civilized nations. In 1876 the Japanese secured a treaty of commerce, and on the 7th of May, 1882, Commodore R W. Shufeldt, after a year's preliminary labor in China, signed at Chi-múl-po, near In-chiun, a treaty on behalf of the United States. In July the Japanese legation at Séoul was destroyed in a riot, and several of its members were slain. Japanese and Chinese troops were landed in Corea, and, by order of Li-Hung Chang and the stratagem of Chinese officers, Tai-wen Kun, the old regent, was carried off to China. Corean parties had been divided into Progressive, or "civilization," and Conservative, or pro-Chinese and "port-closing." The Liberals, now in considerable power after the fall of Tai-wen Kun, compelled the making of treaties with other nations. In 1883 Gen. Lucius H. Foote, appointed minister of the United States, Feb. 26, arrived at Séoul and exchanged ratifications May 19, the Monocacy saluting the Corean flag with guns that had sent shells into the Han forts in 1870.

In September a Corean embassy, consisting of Min-Yong Ik and Hong-Yong Sik and nine other persons, arriving in New York, had audience of President Arthur. Three of the embassy returned home by way of Europe on the U. S. S. Trenton. The British and German treaties were signed Nov. 26, 1883, followed later by those of Italy, Russia, and Austria, and Herr Paul von Möllendorf was made adviser to the Corean Foreign Office.

Improvements. — On the 28th of February, 1884, Corea was connected by telegraphic cable from Nagasaki to Fusan with the rest of the world. The issue of silver coins, the placing of the customs service under the supervision of foreign experts, the appointment of a consul-general in New York, the abolition of the old fairs at the frontier-gate, and the concentration of trade at the ports, promise well for the commercial development of the country.

The Outbreak of 1884.—The early history of the Japan of our generation is repeated in Corea. At the end of 1884 the popular feeling against the rapacious Chinese soldiery was very bitter, while at the same time the Liberal leaders were threatened by plots, of which obtaining knowledge, they, in self-defense, organized an uprising by which obnoxious Conservatives were to be removed. The military forces of the two rival (almost hostile) nations, Japan and China, were then encamped in and near the capital. During the riots, which began on the 4th of December by the attempted assassination of Min-Yong Ik at the banquet given to celebrate the opening of the postal bureau, incendiarism and commotion filled the city, and the palace was surrounded by an angry mob. The King sent for the Japanese legation guards to protect him, and the Conservatives stirred up the Chinese to march against them. A battle ensued, in which the Japanese were obliged to retreat from the palace and city, in which several score were killed or wounded, the latter being treated by Dr. H. N. Allen, an American surgeon. Five or six of the Conservative ministers were slain, and some of the Liberal leaders. The riot, in its origin a popular uprising instigated by radical Progressives against Chinese influence, became an anti-Japanese demonstration. The Conservatives came into power, with the aid of Chinese rifles, and a number of prominent Liberals fled first to Japan and then to the United States. The house of Hong Yong Sik, beheaded by the Chinese, was turned into a hospital, now under Dr. Allen's care. Negotiations between the Chinese and Japanese envoys at Tientsin, conducted in English for the sake of clearness, resulted in a treaty, ratified May 7, 1885, by which the troops of both countries were withdrawn from Corea. The British Government has leased Port Hamilton, in the Nan How group, a few miles northeast of Quelpaert, as a coaling-station, and connected it, November, 1885, by telegraph, *via* Shanghai, with Hong Kong. In place of Herr von Möllendorf, dismissed, Mr. O. N. Denny, late consul-general of the United States at Shanghai, has been appointed.

Ports.—The ports open for trade are (in *Corean*) In-chiun, Pu-san, and Wen-san (*Chinese*, Jenchuan, Fu-san, and Yuen-san; *Japanese*, Nin-sen, Fu-san, Ger-san). In-chiun is four miles from the actual sea-port, Chi-múl-po, which is at the entrance of Han river, on the west coast, opposite Roze Island, in latitude north 37° 28′ and longitude east 126° 33′. The facilities for landing cargo at Chi-múl-po are poor. The tides rise and fall twenty-eight feet in the estuary, leaving, at low water, a long stretch of mud between vessels and shore. Larger vessels must anchor 1½ mile from the jetty, but lighters and vessels drawing not over 15 feet can anchor in a creek or narrow channel near the shore. The distance by land-roads to Séoul is 25 miles, but by water is over 50. Fusan, on the southeast coast, in latitude north 35° 7′ and longitude east 128° 2′, is situated at the foot of a conical pine-clad hill, 10 miles from the city of Tong-nai. The harbor is spacious and inclosed by sheltering hills, with good anchorage. The Japanese dwellers here since 1876 vary in number between one and two thousand, and have five public buildings. Wen-san, on the northeast coast, in latitude north 39° 19′ and longitude east 127° 25′, is on Broughton's Bay. The Japanese settlement, made in 1880, contains good buildings on poor land, and the European quarter lies on a hill-slope two miles or more distant. The Corean town of Wen-san is a mile distant from the Japanese settlement.

Commerce.—The chief Corean exports are gold, silver, hides, horns, bones, beans, fish, gall-nuts, sea-weed, pearl-shells, hemp, copper-ore, tobacco, cotton cloth, various grades of paper, ginseng, raw silk, and timber. The chief imports are cotton and woolen goods, petroleum, tin-plate, glass, dyes, watches, small machinery, and notions. All indications point to the great natural wealth of the peninsula in gold, coal, and other metals and minerals, but the oppressive sumptuary laws will long retard industrial and commercial progress.

Guilds.—In Séoul there are guilds having a peculiar kind of monopoly, known as the six magazines and the six warehouses. The six magazines comprise the silk-shops, dealing in every sort of that fabric, and those for Corean cotton goods, for Corean hempen fabrics, for gray shirtings, etc. The six warehouses comprise the various shops for the sale of boots, hulled rice, paper, Chinese wares, fancy goods, etc. These shops have the monopoly both of wholesale and retail trade, and have control over the small dealers throughout the city, who are allowed to engage in retail business only on condition of buying their stocks from the shops of the guilds. The latter make a practice of acting in concert, and raising and lowering prices at their pleasure. The power of these guilds extends even to the provinces, and wherever there is a branch establishment. The system is the same as at the capital. Beyond these limits, however, the power of the guilds does not extend, and both wholesale and retail trade can be carried on freely. Owing to this abuse, the quantity of goods going into Séoul is ordinarily very small, whereas the wares sent straight into the provinces are plentiful.

COSTA RICA, one of the five Central American republics. The area is estimated at 19,980 square miles. The census of Nov. 30, 1883, gives the number of inhabitants at 182,073; for the electoral census of June, 1885, it was assumed to have increased to 189,425.

Government.—On March 11, 1885, Don Bernardo Soto succeeded Don Próspero Fernández, whose death had taken place on that date, Señor Soto being at the time Vice-President and Minister of the Interior. The Cabinet was formed of the following ministers: Foreign Affairs and Justice, Ascension Esquivel; Public Works, Cárlos Duran; Finance, Commerce, and Public Instruction, Mauro Fernández. The next presidential election is to come off on May 1, 1886. The United States Minister to the five Central American republics, resident at Guatemala, is Mr. H. C. Hall; the American Consul at San José, Mr. A. Morrell. The Minister Resident of Costa Rica in the United States is Señor Peralta, and the Costa Rican Consul-General at New York is Señor José Maria Muñoz.

Finance.—The report of the Minister of Finance of July 14, 1885, shows that on that date the national indebtedness stood as follows:

Foreign debt	$15,963.250
Home debt	2,560,131
Total	$18,523,381

During the fiscal year ended March 31, 1885, the income was $2,198,098, and the outlay $2,642,450, leaving a deficit of $444,352. During the last month of the fiscal year, $161,349 was spent in equipping the military expedition to Salvador. The budget estimate for 1885-'86 fixes the expenditure at $2,936,756, of which the War Department is expected to spend $724,683. The custom-house at Puntarenas is expected to yield $250,000, that of Limon $450,000; the domestic liquor-tax, $750,000; the foreign liquor-tax, $26,000; the tobacco monopoly, $420,000; the Government railroad, $125,000; slaughter-tax, $60,000; stamp-tax, $35,000; Post-Office Department, $19,000; patent-tax, $13,000; tax on mortgages, $15,000; telegraphs, $10,000; the Atlantic Government Railroad, $45,000.

A revision of the customs tariff took place in March, at the time of the war, and all the specific import duties were slightly raised, but not uniformly.

In October the Government accepted Mr. Keith's proposition for the conversion of the old 6 and 7 per cent. bonds, issued in 1871 and 1872, into new 5 per cent. bonds. The Government undertakes to pledge the customs revenue for the payment of the interest on the new bonds, beginning Jan. 1, 1888. As a guarantee for the Government and the bondholders, the old bonds of 6 and 7 per cent. will be deposited in the hands of a treasurer to be named by the agent of the Government and the bondholders. The deposited bonds will be canceled when the railroad is completed, and will be returned to the Government. In case Mr. Keith's company are not able to raise the required capital ($6,000,000 Costa Rican money) this contract will be annulled, leaving the old bonds in the same state as they have been, and the new bonds that may have been issued will be collected.. For the payment of interest on the new bonds the pound sterling will be computed at $5.62½ Costa Rican money.

Post-Office.—The income of the Government from this source in 1884-'85 was $16,182, and the outlay for the service was $19,806.

Army.—Since 1884 the Government, in time of war, has been empowered by act of Congress to call out the militia, which embraces all able-bodied men up to the age of 55, and constitutes a force of about 27,000, while the standing army is restricted to 1,000. During the late invasion of Salvador by the Guatemalan army, Costa Rica sent an auxiliary force of 800 men to oppose it; but they did not arrive in time to take a share in the engagement on the frontier.

Railroads.—The following lines of railway are in operation: Limon to Rio Sucio, 113 kilometres; Puntarenas to Baranca, 14; Alajuela-Cartago *via* Heredia and San José, 43; together, 170 kilometres. During the summer of 1885 the Government granted the exclusive privilege to Minor Keith and associates of building and operating the projected Costa Rica-Nicaragua Railroad. This line is to extend from the present Costa Rica Railroad, at a point west of Jimenez river, to the Nicaraguan frontier, whence it is intended to extend the line to Lake Nicaragua.

Canalization.—Another contract was made by the Government with Ricardo Schutt, of Stolz, for the canalization of the lagoons on the Atlantic coast of the republic, between the Boca del Martina and the Rio Colorado.

Telegraphs.—The number of kilometres in operation is 586, and the number of messages forwarded from March 1, 1884, to Feb. 28, 1885, was 9,779 government telegrams and 30,504 private dispatches in the interior. The income was $9,441, and the outlay $27,426.

Telephones.—Don E. Cardoso, agent of Messrs. Wendell & Phillips, of Boston, owners of the Bell telephones in Central America, visited Costa Rica during the summer, and will soon introduce the system throughout the country.

Commerce.—The following is a tabular statement of the foreign trade in 1884:

IMPORTATION.

From England	$2,024,750
France	359,064
Germany	104,928
The United States	943,764
Other countries	89,413
Total	$3,521,919

EXPORTATION.

To England	$1,697,605
France	541,307
Germany	441,361
The United States	1,310,297
Other countries	229,045
Total	$4,219,615

The export of Costa Rican products from Puntarenas and Limon, from Jan. 1 to May 31, 1885, was:

From Puntarenas	$1,518,933
Limon	1,124,315
Total	$2,643,248

Of this amount $1,359,344 was coffee, representing 85,235 bags, weighing 10,874,750 pounds Spanish.

The maritime movement in 1883 was:

PORTS.	Steamers.	Sailing-vessels.	Tonnage.
Entered at Puntarenas....	80	15	126,240
Sailed from Puntarenas..	81	15	126,192
Entered at Limon.........	72	25	108,326
Sailed from Limon........	71	26	110,270
Total.................	304	81	471,028

Agriculture.—The yield of several staples in 1884 was as follows: Indian corn, 25,535,381 litres; beans, 4,038,783 litres; potatoes, 1,228,708 litres; rice, 1,208,716 litres; wheat, 145,541 litres; sugar, 412,298 kilogrammes; molasses, 7,428,724 kilogrammes. There were in bearing 23,446.278 coffee-shrubs, owned by 7,490 coffee estates, and they gathered altogether 405,053 quintals (of 101½ pounds). In the Limon district 570,000 banana-trees yielded 425,000 bunches of bananas.

Education.—In 1885 there were in the republic 176 public primary schools: in the province of San José, 1 school to every 1,337 inhabitants; in the province of Alajuela, 1 to every 852; in Cartago, 1 to 1,217; in Heredia, 1 to 1,122; in Guanacaste, 1 to 532; and in the Puntarenas district, 1 school to every 1,540 inhabitants. The average for the entire country was 1 school to every 1,023 inhabitants. The national expenditure during the fiscal year 1884–'85 was $79,941. Out of 27,109 children of school age, only 12,632 availed themselves during the year of the gratuitous instruction offered them. The expenditure averaged $6.32 per pupil, and 43 cents per capita of the population. Higher instruction is given in three colleges—the San José University Institute, the Cartago City College of San Luis Gonzaga, and the Heredia City College of San Agustin. The San José Institute has a good library.

Protestantism in San José.—There is a little Protestant chapel in San José supported by the English and American residents. It receives no aid from any foreign missionary society, but is entirely self-supporting, having about sixty members of the congregation, half as many communicants, and twenty-five children in the Sunday-school. This chapel has been established nearly twenty years, but has had an ordained minister but little of that time, the lay members conducting the service after the Episcopal formula, and reading sermons. There are representatives of five different denominations in the Sunday-school.

An account of the Central American war will be found under Guatemala.

COUPON CASES. An opinion of great importance was rendered April 20, 1885, by the United States Supreme Court in a series of Virginia bond cases, in which the Court held that a tender of coupons in payment of taxes is equivalent to a tender in money; that if a tax-collector refuses such tender and seizes the property of the tax-payer for non-payment in money, he may be sued for trespass or damages; and that the collector may be restrained by injunction from levying on the property of the tax-payer who has tendered the amount of his taxes in coupons.

The points affirmed arose under the act of the Virginia Legislature of Jan. 26, 1882, and the amendatory act of March 13, 1884. The former provides that tax-collectors "shall receive in discharge of the taxes, license taxes, and other dues, gold, silver, United States Treasury notes, national-bank currency, and nothing else." This excludes receipt of the coupons issued under the act of 1871. The act of March 13, 1884, provides that "no action of trespass or trespass on the case shall be brought or maintained against any collecting officer for levying upon the property of any tax-payer who may have tendered in payment, in whole or in part, any coupon, or paper purporting to be a coupon, cut from bonds of this State for such taxes, and who shall refuse to pay his taxes in gold, silver, United States Treasury notes, or national-bank notes." The Court held that this legislation impaired the obligation of the contract entered into between the State and its creditors, by the act of 1871, which, after authorizing the issue of bonds for the funding of the public debt, declares that "the coupons shall be payable semi-annually, and be receivable at and after maturity for all taxes, debts, dues, and demands, due the State." The breach of this contract by the acts of Jan. 26, 1882, and March 13, 1884, was pronounced by the Court a violation of Article I, section 10, of the Federal Constitution, which declares that no State shall pass any "law impairing the obligation of contracts."

The case in which the leading opinion of the Court was rendered was Poindexter *vs.* Greenhow, reported in 114 United States Reports. Greenhow was the treasurer of the city of Richmond. He refused to receive from Poindexter coupons of 1871 in payment of taxes, and seized personal property of the latter. Poindexter brought suit for the recovery of this property. The Federal Supreme Court declared that a valid contract had been created by the act of 1871; that the obligation of this contract was impaired by the legislation of 1882 and 1884, and hence that such legislation was unconstitutional and void. "From the passage of the act of 1871," says the Court, "it became the legal duty of every tax-collector to receive coupons from these bonds, offered for that purpose by tax-payers, in payment of taxes, upon an equal footing, at an equal value, and with equal effect, as though they were gold or silver or legal-tender treasury notes. They were by that act reduced, in effect, into money, and, as between the State and its tax-payers, were a legal tender as money. And, being not only a law, but a contract, it became, by force of the Constitution of the United States, irrepealable, and therefore is to-day, what it was when first enacted, the unchangeable law of Virginia. After a tender of such coupons by a tax-payer in payment of taxes, and a refusal by a tax-collector to receive them, the situation and rights of the tax-payer and coupon-holder were precisely what they would have been if he had made a like tender in gold coin and it had been refused."

Mr. Justice Matthews, who wrote the opinion of the Court, then proceeded to draw a distinction between the point raised in this case and that decided by the Court two years before in Antoni *vs.* Greenhow. The opinion in the latter case is given in the "Annual Cyclopædia" for 1882, page 648. The question there presented to the Court arose under the act of Jan. 14, 1882. That act, after reciting that forged and spurious bonds were in existence, prohibited treasurers and collectors from receiving any of the 1871 coupons in payment of taxes until their genuineness should be established by the holder in a court of law. The tax-payer was required to pay his taxes in money which would be refunded to him after he had proved that his coupons were genuine. The act then modified the existing remedy of the holder by providing that whenever any tax-payer should apply to a court for a mandamus to compel a collector to receive the coupons for taxes, it should be the duty of the collector to make return to the mandamus that he was "ready to receive said coupons in payment of such taxes, debts, and demands as soon as they have been legally ascertained to be genuine." The Court held that this act did not destroy the coupon-holder's remedy, but merely changed it; that it did not impair the obligation of his contract, and therefore was not unconstitutional. In concluding the opinion of the court, Chief-Justice Waite said: "The question presented by this record is not whether the tax-collector is bound in law to receive the coupon, notwithstanding the legislation which on its face prohibits him from doing so, nor whether, if he refuses to take the coupon and proceeds with the collection of the tax by force, he can be made personally responsible in damages for what he does, but whether the obligation of the contract has been impaired by the changes which have been made in the remedies for its enforcement in case he refuses to accept the coupons. We decide only the question which is actually before us." Justices Bradley and Gray concurred. Justice Matthews concurred in the judgment, but not in the reasons on which it was based. Justices Field and Harlan dissented, and gave their views in elaborate opinions.

The difference between that case and the one now before the court is thus explained by Mr. Justice Matthews:

> That was a case in which it was sought, by *mandamus*, specifically to enforce the contract of the State with the coupon-holder, by compelling, by affirmative action and process of law, the collector actually to receive the coupons tendered in satisfaction of taxes. It left unaffected the right of the coupon-holder and tax-payer, after his tender had been unlawfully refused, to stand upon his contract and the law, in defense of his rights, both of person and property, against all unlawful assaults and seizures. In the former he was an actor, seeking affirmative relief, to compel the specific performance of the contract. In the latter he is a defendant, passively resting on his rights, and resisting only demands and exactions sought to be enforced against him in denial of them. He has himself, in all things, performed the contract on his part, and obeyed the law, and simply insists, that if more is illegally exacted and taken from him, he shall have the remedy which the law gives to every other citizen, not himself in default, against the wrong-doer, who, under color of law, but without law, disturbs or dispossesses him. As we have seen, the coupon-holder whose tender of genuine coupons in payment of taxes has been refused, stands upon the same footing, in this respect, as though he had tendered gold coin in similar circumstances and with like result. The case of the plaintiff here is reduced to this. He had paid the taxes demanded of him by a lawful tender. The defendant had no authority of law thereafter to attempt to enforce other payment by seizing his property. In doing so, he ceased to be an officer of the law, and became a private wrong-doer. It is the simple case in which the defendant, a natural private person, has unlawfully, with force and arms, seized, taken, and detained the personal property of another. That an action of detinue will lie in such a case, according to the law of Virginia, has not been questioned. The right of recovery would seem to be complete, unless this case can be met and overthrown on some of the grounds maintained in argument by counsel for the defendant.

The defense of Virginia was made chiefly on two grounds: First, that the coupons of 1871 were bills of credit; that their issue was in violation of Article I, section 10, of the Federal Constitution, which declares that no State shall "emit bills of credit"; and hence that the coupons were invalid. Second, that the suit of the plaintiff could not be maintained because it was a suit against the State of Virginia, in violation of the eleventh amendment to the Federal Constitution, which declares that "the judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by citizens of another State, or by citizens or subjects of any foreign state."

The Court decided that the coupons in question were not bills of credit within the meaning of the constitutional prohibition. It then went into an elaborate consideration of the question whether the suit against the tax-collector was a suit against the State which could not be maintained. It said that the immunity from suit secured to the States is a part of the Constitution, of equal authority with every other, but no greater, and to be construed and applied in harmony with all the provisions of that instrument. Such immunity does not exempt the State from the constitutional provision that no State shall pass any law impairing the obligation of contracts, for it has long been settled that contracts between a State and an individual are as fully protected by the Constitution as contracts between individuals. The question whether a suit is within the prohibition of the eleventh amendment is not always determined by reference to the nominal parties on the record. "A defendant sued as a wrong-doer, who seeks to substitute the State in his place, or to justify by the authority of the State, or to defend on the ground that the State has adopted his act and exonerated him, can not rest on the bare assertion of his defense. He is bound to establish it. The State is a political corporate body, can act only through agents, and can command only by laws. It is necessary, therefore, for such a defendant, in order to complete his defense, to produce a law of the State which constitutes his commission as its agent, and a warrant for his act. This the defendant, in the present case, undertook to do. He relied on the act of Jan. 26, 1882, requiring him to collect taxes in gold, silver, United States Treasury notes, national-bank currency, and nothing else, and thus forbidding his receipt of coupons in lieu of money. That, it is true, is a legislative act of the government of Virginia, but it is not a law of the State of Virginia. The State has passed no such law, for it can not; and what it can not do, it certainly, in contemplation of law, has not done. The Constitution of the United States, and its own contract, both irrepealable by any act on its part, are the law of Virginia; and that law made it the duty of the defendant to receive the coupons tendered in payment of taxes, and declared every step to enforce the tax, thereafter taken, to be without warrant of law, and therefore a wrong. He stands, then, stripped of his official character, and, confessing a personal violation of the plaintiff's rights, for which he must personally answer, he is without defense."

The distinction between the government of a State and the State itself, the opinion continues, is important and should be observed. In common speech and common apprehension they are usually regarded as identical; as ordinarily the acts of the government are the acts of the State, because, within the limits of its delegation of powers, the government of the State is generally confounded with the State itself, and often the former is meant when the latter is intended. The State itself is an ideal person, intangible, invisible, immutable. The government is an agent, and, within the sphere of the agency, a perfect representative; but outside of that it is a lawless usurpation. The Constitution of the State is the limit of the authority of its government, and both government and State are subject to the supremacy of the Constitution of the United States. The State can speak and act only by law; whatever it does say and do must be lawful. That which is unlawful, because made so by the supreme law, the Constitution of the United States, is not the word or creed of the State, but is the mere wrong and trespass of those individual persons who falsely speak and act in its name. "This distinction is essential to the idea of constitutional government. To deny it or blot it out obliterates the line of demarkation that separates constitutional government from absolutism, free self-government based on the sovereignty of the people from that despotism, whether of the one or the many, which enables the agent of the State to declare and decree that he is the State; to say, '*L'état, c'est moi.*' Of what avail are written constitutions whose bills of right for the security of individual liberty have been written, too often, with the blood of martyrs shed upon the battle-field and the scaffold, if their limitations and restraints upon power may be overpassed with impunity by the very agencies created and appointed to guard, defend, and enforce them; and that, too, with sacred authority of law, not only compelling obedience, but entitled to respect? And how else can these principles of individual liberty and right be maintained, if, when violated, the judicial tribunals are forbidden to visit penalties upon individual offenders, who are the instruments of wrong, whenever they interpose the shield of the State? The doctrine is not to be tolerated. The whole frame and scheme of the political institutions of this country, State and Federal, protest against it. Their continued existence is not compatible with it. It is the doctrine of absolutism, pure, simple, and naked; and of communism, which is its twin; the double progeny of the same evil birth."

The mandate of the State affords no justification for the invasion of rights secured by the Constitution of the United States; otherwise that Constitution would not be the supreme law of the land. When, therefore, an individual defendant pleads a statute of a State, which is in violation of the Constitution of the United States, as his authority for taking or holding property to which the citizen asserts title, and for the protection or possession of which he appeals to the courts, to say that the judicial enforcement of the supreme law of the land, as between the individual parties, is to coerce the State, ignores the fundamental principles on which the Constitution rests, and practically makes the statutes of the States the supreme law of the land within their respective limits. Justice Matthews then proceeded to apply these principles to the case before the Court, as follows:

> When, therefore, by the act of March 30, 1871, the contract was made, by which it was agreed that the coupons issued under that act should thereafter be receivable in payment of taxes, it was the contract of the State of Virginia, because, though made by the agency of the government, for the time being, of the State, that government was acting within the scope of its authority, and spoke with its voice as its true representative; and inasmuch as, by the Constitution of the United States, which is also the supreme law of Virginia, that contract, when made, became thereby unchangeable and irrepealable by the State, the subsequent act of Jan. 26, 1882, and all other like acts, which deny the obligation of that contract and forbid its performance, are not the acts of the State of Virginia. The true and real Commonwealth which contracted the obligation is incapable in law of doing anything in derogation of it. Whatever having that effect, if operative, has been attempted or done, is the work of its government acting without authority, in violation of its fundamental law, and must be looked

upon, in all courts of justice, as if it were not and never had been. The argument, therefore, which seeks to defeat the present action, for the reason that it is a suit against the State of Virginia, because the nominal defendant is merely its officer and agent, acting in its behalf, in its name, and for its interest, and amenable only to it, falls to the ground, because its chief postulate fails. The State of Virginia has done none of these things with which this defense charges her. The defendant in error is not her officer, her agent, or her representative, in the matter complained of, for he has acted not only without her authority, but contrary to her express commands. The plaintiff in error, in fact and in law, is representing her, as he seeks to establish her law, and vindicates her integrity as he maintains his own right.

Tried by every test which has been judicially suggested for the determination of the question, this can not be considered to be a suit against the State. The State is not named as a party in the record; the action is not directly upon the contract; it is not for the purpose of controlling the discretion of executive officers, or administering funds actually in the public treasury, as was held to be the case in Louisiana *vs.* Jumel, 107 United States Reports, 711; it is not an attempt to compel officers of the State to do the acts which constitute a performance of its contract by the State, as suggested by a minority of the court in Antoni *vs.* Greenhow, 107 United States Reports, 769, 783; nor is it a case where the State is a necessary party, that the defendant may be protected from liability to it, after having answered to the present plaintiff. For, on this supposition, if the accounting officers of the State government refuse to credit the tax-collector with coupons received by him in payment of taxes, or seek to hold him responsible for a failure to execute the void statute, which required him to refuse coupons in payment of taxes, in any action or prosecution brought against him in the name of the State, the grounds of the judgment rendered in favor of the present plaintiff will constitute his perfect defense. And as that defense, made in any cause, though brought in a State court, would present a question arising under the Constitution and laws of the United States, it would be within the jurisdiction of this Court to give it effect, upon a writ of error, without regard to the amount or value in dispute.

It is still urged upon us, however, in argument, that, notwithstanding all that has been or can be said, it still remains that the controversy disclosed by the record is between an individual and the State; that the State alone has any real interest in its determination; that the practical effect of such determination is to control the action of the State in the regular and orderly administration of its public affairs; and that, therefore, the suit is and must be regarded as a suit against the State, within the prohibition of the eleventh amendment to the Constitution. Omitting for the time being the consideration already enforced, of the fallacy that lies at the bottom of this objection, arising from the distinction to be kept in view between the government of a State and the State itself, the premises which it assumes may all be admitted, but the conclusion would not follow.

The thing prohibited by the eleventh amendment is the exercise of jurisdiction in a "suit in law or equity commenced or prosecuted against one of the United States by citizens of another State, or by citizens or subjects of any foreign state." Nothing else is touched, and suits between individuals, unless the State is the party in a substantial sense, are left untouched, no matter how much their determination may incidentally and consequentially affect the interests of a State, or the operations of its government. The fancied inconvenience of an interference with the collection of its taxes by the government of Virginia, by suits against its tax-collectors, vanishes at once upon the suggestion that such interference is not possible, except when that government seeks to enforce the collection of its taxes contrary to the law and contract of the State, and in violation of the Constitution of the United States. The immunity from suit by the State now invoked, vainly, to protect the individual wrongdoers, finds no warrant in the eleventh amendment to the Constitution, and is, in fact, a protest against the enforcement of that other provision which forbids any State from passing laws impairing the obligation of contracts. To accomplish that result requires a new amendment, which would not forbid any State from passing laws impairing the obligation of its own contracts.

The above case, Poindexter *vs.* Greenhow, was an action in detinue for the recovery of the specific property of the plaintiff seized by the defendant. White *vs.* Greenhow was an action for damages alleged to have been sustained by plaintiff through seizure of his property by the defendant. The Court held it could be maintained. In Allen *vs.* The Baltimore and Ohio Railroad Company, the Court held that the State officers might be restrained by injunction from the collection of taxes by distraint upon rolling-stock and other property of railroad corporations after a tender of payment in tax-receivable coupons, on the ground that there is no adequate remedy at law.

In Marye *vs.* Parsons the Court held that the contract right of a coupon-holder under the act of 1871 can be exercised only by a tax-payer; that a coupon-holder who is not a tax-payer is not entitled to an injunction to restrain tax-collectors from refusing to receive his coupons when tendered in payment of taxes. Parsons was a citizen of New York, and filed a bill in equity in the United States Circuit Court in Virginia against Marye, the Auditor, and other officers of the Commonwealth. He alleged that he was the holder of coupons to the amount of $28,000; that he had "made arrangements with sundry tax-payers of Virginia to use his coupons in payment of their taxes, by which arrangement, if the said coupons can be used without delay or difficulty, he will receive nearly par therefor, and thus be able to have his coupons collected." He asked that the defendants be required to receive his coupons when tendered in payment of taxes by any tax-payer. In delivering the opinion of the Supreme Court on this novel question, Justice Matthews said:

> This bill is without precedent, and should have been dismissed. It is a clear case, as stated, of *damnum absque injuria.* So far as the contract with the complainant was, that the State should pay to him his coupons at maturity, there is, no doubt, a breach; but he asks no relief as to that, for there is no remedy by suit to compel the State to pay its debts. So far as the contract was to receive the coupons of the complainant in payment of taxes and other dues to the State, there is no breach, for he does not allege that any of them have been tendered by any tax-payer or debtor to the State in payment of taxes or other dues; nor that there has been a refusal on the part of any tax-collector, or other officer of the State charged with the collection and receipt of taxes and dues to the State, to receive them in payment therefor. Personally the complainant has no right to offer them for such purpose, for he owes no taxes or other debt to the State. There is nothing shown in the bill by which he is prevented from transferring them to others who would have the legal right to use them in that way, except

that, being discredited for such uses by the previous refusals of the officers of the State to receive other but similar coupons, the complainant can find no one willing to purchase them from him at a reasonable price for such purposes. This damage is not actionable, because it is not a direct and legal consequence of a breach of the contract, and is not distinguishable from the damage any creditor might suffer from the known inability or unwillingness of his debtors to perform their obligations. Such discredit might, and often does, result in the bankruptcy and financial ruin of the creditor, but no action lies to recover damages for the consequential loss, which the law does not connect with the default, as cause and effect. To enable the complainant to avail himself of the benefit of his contract with the State, to receive his coupons in payment of taxes, he must first assign them to some one who has taxes to pay, as he has not; but when he does so, by the assignment, he has lost his interest in the contract and his rigbt to demand its performance, all right to which he has transferred with the coupons. It is only when in the hands of tax-payers or other debtors that the coupons are receivable in payment of taxes and debts due to the State.

The bill as framed, therefore, calls for a declaration of an abstract character, that the contract set out requiring coupons to be received in payment of taxes and debts due to the State is valid; that the statutes of the General Assembly of Virginia impairing its obligations are contrary to the Constitution of the United States, and therefore void; and that it is the legal duty of the collecting officers of the State to receive them when offered in payment of such taxes and debts.

But no court sits to determine questions of law *in thesi.* There must be a litigation upon actual transactions between real parties, growing out of a controversy affecting legal or equitable rights as to person or property. All questions of law arising in such cases are judicially determinable. The present is not a case of that description.

In Moore *vs.* Greenhow, decided May 4, 1885, the Court, affirming the judgment of the Virginia Supreme Court of Appeals, held that the State officers could not be compelled by *mandamus* to receive coupons in payment of license-taxes. "This being a case," said Justice Matthews, "in which, by *mandamus*, the plaintiff seeks to compel the officers of the State of Virginia to receive coupons instead of money in payment of license-taxes, it comes within the exact terms of the majority of this Court in Antoni *vs.* Greenhow ['see Annual Cyclopædia' for 1882, page 648], according to which the plaintiff is remitted to the remedy provided by the act of Jan. 14, 1882."

Chief-Justice Waite and Justices Miller, Bradley, and Gray dissented from the principles affirmed by the majority of the Court, in the opinion in Poindexter *vs.* Greenhow. The dissenting opinion was prepared by Justice Bradley. The fundamental ground of dissent was that the proceedings in these coupon cases were virtually suits against Virginia to compel a specific performance by the State of its agreement to receive the coupons in payment of all taxes, dues, and demands. Such suits were repugnant to the eleventh amendment of the Federal Constitution. To the argument that the laws passed by the State forbidding the receipt of the coupons were in violation of that provision of the Constitution which forbids a State to impair the obligation of contracts, Justice Bradley replied: If the contract clause and the eleventh amendment came into conflict, the latter has paramount force. It was adopted as an amendment to the Constitution, and operates as an amendment of every part of the Constitution to which it is at any time found to be repugnant. Every amendment of a law or constitution revokes, alters, or adds something. It is the latest declared will of the law-maker, and has paramount force and effect. The effect of the amendment is that even if a State should pass a law impairing the validity of its own contract, no redress can be had for the enforcement thereof against the State in the Federal courts. No State can be coerced into a fulfillment of its contracts or other obligations to individuals, by the instrumentality of the Federal judiciary.

Now, what is the object, Justice Bradley continued, of all this litigation, which fills our courts in reference to the Virginia bonds and coupons, but an attempt, through the medium of the Federal courts, to coerce the State of Virginia into a fulfillment of her contract; to enforce a specific performance of her agreement? It is nothing else. Injunctions are sought, *mandamuses* are sought, damages are sought, for the sole purpose of enforcing a specific performance of the engagement made by the State by the act of 1871. There is no question about the validity of the taxes. They are admittedly due. The officer is entitled to collect them; his authority is undisputed. The coupons are tendered in payment—not as money, for they have no quality of money—but as a set-off, which, as is insisted, the State has agreed to allow. (The majority of the Court held that the coupons were not set-offs.) The tax-payer stands on this agreement. That is the situation, and that is the whole of it. He stands on the agreement, and seeks to enforce it. All suits undertaken for this end are, in truth and reality, suits against the State to compel a compliance with its agreement. A set-off is nothing but a cross-action, and can no more be enforced against a State without its consent than a direct action can be. It is argued that these coupons are not set-offs. The argument is not sound.

The coupons, then, are tendered, and the tax-collector declines to receive them. The State does not permit him to receive them. By subsequent legislation it has declared that the taxes must be paid in money, and that the tax-collector must receive nothing else in payment, and that coupons, if offered, must be investigated in a juridical way to ascertain their genuineness before they will be paid, and when so ascertained the provision for paying them is ample. The officers have no power but what the State gives them. They act for and on behalf of the State, and in no other way. To sue them, therefore, because they will not receive the coupons in payment, is virtually to sue the State. The whole object is to coerce the State. It is idle to say that the proceeding is only against the officers.

But it is said that it is not the State, but the government of the State, which declines to receive the coupons, contrary to engagement. It is said that the government does not represent the State when it does an unconstitutional act, or passes an unconstitutional law. While this may be averred (as it was averred in Texas *vs.* White, 7 Wallace's Reports, 700), when the government of a State attempts to force the State from its constitutional relations with the United States, and to produce a disruption of the fundamental bonds of the national compact; and while in such a case it may be admissible to say that the government of the State has exercised a usurped authority, this mode of speech is not admissible in ordinary cases of legislation and public administration. A State can only act by and through its constituted authorities, and it is represented by them in all the ordinary exhibitions of sovereign power. It may act wrongly; it may act unconstitutionally; but to say that it is not the State that acts is to make a misuse of terms, and tends to confound all just distinctions. It also tends, in our judgment, to inculcate the dangerous doctrine that the government may be treated and resisted as a usurpation whenever the citizen, in the exercise of his private judgment, deems its acts to be unconstitutional.

But, then, it will be asked, has the citizen no redress against the unconstitutional acts or laws of the State? Certainly he has. There is no difficulty on the subject. Whenever his life, liberty, or property is threatened, assailed, or invaded by unconstitutional acts, or by an attempt to execute unconstitutional laws, he may defend himself, in every proper way, by *habeas corpus*, by defense to prosecutions, by actions brought on his own behalf, by injunction, by mandamus. Any one of these modes of redress, suitable to his case, is open to him. A citizen can not, in any way, be harassed, injured, or destroyed by unconstitutional laws without having some legal means of resistance or redress. But this is where the State or its officers move against *him*. The right to all these means of protection and redress against unconstitutional oppression and exaction is a very different thing from the right to coerce the State into a fulfillment of its contracts. The one is an indefeasible right, a right which can not be taken away; the other is never a right, but may or may not be conceded by the State; and, if conceded, may be conceded on such terms as the State chooses to impose.

All the cases that are cited from the books in which redress has been afforded to individuals by the courts against State action are cases arising out of the first class, and not out of the second; cases of State aggression, and not of refusal to fulfill obligations. In all these cases the State has attempted to do some unconstitutional act injurious to the party, or some act which it had entered into a contract not to do; and redress was sought against such aggressive act; they, none of them, exhibit the case of a State declining to pay a debt or to perform an obligation, and the party seeking to enforce its performance by judicial process.

As for the great mass of cases in which the remedies of mandamus and injunction have been sanctioned, to compel State officers to do, or refrain from doing, some act in which the plaintiff had an interest, they have generally been cases in which the law made it the duty of the officers to do the act commanded, or not to do the act forbidden. Those of a different character, as where a remedy has been taken away, have been purely cases of demands by one individual against another, and not of an individual against the State.

The present cases differ *toto cœlo* from any of these. They are attempts to coerce a State by judicial proceedings; as before stated, they are that, and nothing else. It is useless to attempt to deceive ourselves by an adroit use of words, or by a train of metaphysical reasoning. We can not, in that way, change the nature of things.

This is the first time, we believe, since the eleventh amendment was adopted, in which a State has been coerced by judicial proceedings at the suit of individuals in the Federal courts. That this is such a case, seems one of the plainest propositions that can be stated.

(For an earlier opinion of the United States Supreme Court on suits against the State, and also its opinion on suits against the United States, see "Annual Cyclopædia" for 1882, pages 462, 460.)

CUBA, an island in the West Indies, belonging to Spain. (For statistics of area, population, etc., see the "Annual Cyclopædia" for 1883.)

Dominion Proposals to Spain.—In reply to an interpellation on February 24, Mr. Leonard Tilley, the Canadian Minister of Finance, said that in 1884 Sir Charles Tupper, High Commissioner of the Dominion at London, had been instructed by the Governor-General to take certain steps with a view of securing the same advantages for Canada that were enjoyed by the United States under the flag treaty with Spain of 1884. Instructions were given to Sir Charles to make certain propositions through the British minister at Madrid, and correspondence was entered into, the result of which was that the Government at Madrid declined to enter into negotiations with the Canadian Government or its representatives until the fate of the larger reciprocity treaty with the United States relating to Cuba and Porto Rico was finally known.

Agreement with the United States.—In August the American minister, Mr. Foster, reached an agreement with the Minister of Foreign Affairs, at La Granja, near Madrid, to the effect that the provisions of reciprocity contained in the former treaty relating to Cuba and Porto Rico were to be considered abandoned.

A new treaty was drawn up, confined to reforms in the Cuban customs laws, Spain accepting the *modus vivendi*, signed in February, 1884, which was contended for by the United States. The settlement of the claims of American citizens against the Spanish Government arising from the insurrection in Cuba was also provided for.

Army.—The Commander-in-Chief and Captain-General of the island is Don Ramon Fajardo ó Izquierdo; the Civil Governor of Havana is Don Antonio Telleria. The strength of the Spanish forces in Cuba, in 1885, was 22,000 men. A large portion of this military force was kept busy during the year in capturing the various small filibustering expeditions that effected a landing. These bands of adventurers found neither material nor even moral support and sympathy on shore, and most of the men composing them were tried by court-martial and shot.

Finance.—Cuban indebtedness in 1885 stood as shown in the following table:

	Pesetas.
The Goguel loan	30,000,000
The 1879 six per cent. loan, for which the duties are pledged	350,000,000
The three per cent. loan, for which a sinking fund is provided	200,000,000
Sundry indebtedness	100,000,000
The floating debt	100,000,000
Paper money in circulation	200,000,000
Total	980,000,000
Equal to	$196,000,000

The budget estimate for 1885–'86 was fixed as follows:

Outlays.	Pesetas.
Interest on the debt, etc.	14,236,750
Department of Justice	882,259
" War	7,948,659
" Finance	1,342,057
" Navy	1,970,330
" Interior	4,054,441
" Public Works and Instruction	735,157
Total	31,169,653

Income.	Pesetas.
Contributions and taxes	7,939,985
Revenue from customs	13,105,000
" monopolies	2,119,100
" lotteries	2,663,125
" state properties	307,400
Other revenues	4,655,500
Total	30,790,110

In September the home Government negotiated a 6 per cent. loan at Madrid for $20,000,000, in behalf of the Cuban treasury, extinguishable in the course of fifteen years through the operation of a sinking fund. The rate at which this loan was taken was 92 per cent., with ½ per cent. commission. The Bank of Spain, for a commission of 1½ per cent., takes charge of the payments toward the sinking fund and of the coupons. The proceeds of this loan were set aside for canceling the floating debt. The revenues from the stamp duties were assigned as a guarantee, besides the subsidiary guarantee of the Spanish treasury.

Customs.—The revenue derived from duties at the custom-houses of the island during the fiscal year ended June 30, 1885, was as follows:

SOURCES.	1884–1885.	1883–1884.
On imports	9,625,540 pesos.	12,941,975 pesos.
On exports	3,702,814 "	5,711,843 "
Total	13,328,354 pesos.	18,653,818 pesos.
Showing a decrease of.	5,325,464 "	

July and August taken together showed an excess over the corresponding months of the preceding year of $279,617.

Sugar.—Up to the month of May, the prospects for sugar, the main industry in Cuba, were dismal and hopeless in the extreme, when fortunately the curtailed beet-sugar production on the Continent of Europe, and a strong partially speculative upward movement in the price of the staple all over the world, caused a rapid advance of about 25 per cent., and enabled Cuban planters to sell the remnants of their crop at correspondingly better rates. The enhanced value of sugar continued during the remainder of the year with slight fluctuations, and planters in Cuba not only saw their credit restored, but were enabled to order improved machinery from the United States, and prepare for a large crop in 1885–'86. The recent sugar and molasses crops in Cuba have been:

YEARS.	Sugar.	Molasses.
1883–'84	551,000 tons.	120,000 tons.
1884–'85	590,135 "	117,430 "

After deducting 30,000 tons for annual local consumption, the remainder is exported.

Tobacco.—Cuban tobacco has of late years lost much of its prestige through forcing and artificial manures, and has to sustain sharp competition abroad where it formerly commanded the market, so that some years may have to elapse before the soil can recover from the excessive and indiscriminate use of artificial fertilizers. A few years ago the leaf harvested in the Vuelta Abajo was not sufficient to meet the large demand, and, in order to increase the yield, growers made use of guanos of all sorts, and with such bad results that in many instances they find it now difficult to place on reasonable terms more than half, and sometimes less, of their crops. In a few localities only the soil has not been spoiled by spurious manures, and the leaf grown there commands very high prices, and is warmly competed for by local manufacturers and buyers for the United States. Notwithstanding the fact that the last crop has been of better quality than heretofore, a good many growers were compelled to abandon tobacco-cultivation for a certain time and devote the ground to other purposes. It appears that this change of cultivation is absorbing the fertilizers and restoring to the soil its former good qualities, and, if one can judge from the splendid appearance of the leaf and the ready sale it now meets with, it would seem that the Vuelta Abajo yields are regaining their former renown.

The total tobacco production is estimated at between 400,000 and 500,000 quintals (one quintal equals 101½ pounds American). As is well known, that grown in the Vuelta Abajo, or district west of Havana, is the best kind, and has given Cuba its well-earned reputation. About 67,000 acres are cultivated in the district, and only about one fourth of the product is manufactured in the island. Very large quantities of the leaf are exported in bales and rolled abroad.

Cigars.—It is evident, however, that, given the total production and corresponding result in the manufactured form, but a small portion of the cigars sold in Europe and elsewhere as Havana cigars have the slightest claim to a connection with Cuba. The chief and only important manufactories of these cigars are in Havana, and much care and money are expended in producing a handsome-looking article. As much as $40 (gold) per 1,000 is paid to skilled laborers for making up first-class goods. About 17,000 operatives are employed in this manufacture in Havana alone. No really fine-flavored aromatic leaf has been harvested since 1881. Great hopes were entertained of the 1885 crop, and it was admitted that the quality was excellent and the yield large.

In September severe measures were adopted, both in Havana and Porto Rico, to prevent the fraudulent importation into Cuba of low classes of foreign tobacco as Porto-Rican productions.

Commerce.—The American trade with Cuba is shown in the following table:

YEARS.	Import from Cuba into the United States.	Domestic export from the United States to Cuba.	Total trade.
1885....	42,306,093 pesos.	8,719,195 pesos.	51,025,288 pesos.
1884....	57,181,497 "	10,562,880 "	67,744,377 "
1883....	65,544,534 "	14,567,918 "	80,112,452 "

Decrease between 1885 and 1883 of $29,087,164, or 37 per cent., due nearly altogether to the decline in sugar and temporary impoverishment of Cuban planters.

The sugar exportation from Cuba in recent years has been:

YEARS.	HOGSHEADS.			BOXES.		
	To the United States.	Total hogsheads.	Tons.	To the United States.	Total boxes.	Tons.
1883 ...	598,532	610,500	373,466	103,273	164,060	34,789
1882....	788,127	810,995	500,789	93,604	195,102	37,069
1881....	624,563	666,973	411,856	100,819	191,323	36,351
1880....	681,154	728,724	449,987	115,202	241,295	45,846

Railroads.—Powerful syndicates of European bankers signified to the home Government in July their readiness to advance $40,000,000 for the completion of the Cuban railroad system, on guarantees by both the Madrid and Cuban treasuries. The first lines to be built are to measure 891 kilometres, as follow:

Santa Clara to Ciego de Avila, *via* San Andres.....	150 kilo.
Ciego de Avila to Puerto Principe......	100 "
Puerto Príncipe to Victoria de las Tomas..........	125 "
Santa Cruz del Sur to Puerto Príncipe............	78 "
Victoria de las Tomas to Enramadas, *via* Bayamo..	169 "
" " " " Holguin..	159 "
Bayamo to Manzanillo...........................	54 "
Cristo to Santa Catalina del Guaso................	56 "
Total...................................	891 kilo.

This will constitute the Cuban Grand Central Railway. The entire line is to be finished in six years; the Government guarantees for ninety-nine years an annuity of 8 per cent. on the capital invested. Should the earnings not cover the expense during a year, the railroad company loses the difference; if, on the other hand, the net earnings exceed 8 per cent., the Government is to receive 50 per cent. of the surplus. The Government engages to pay its 8 per cent. subsidy in gold quarterly. The syndicate estimates that the cost of the entire line will reach $24,465,000.

On March 16, the branch line of railway between Santo Domingo and La Esperanza, constructed by the Cárdenas and Tucaro Railroad Company, was thrown open to traffic, establishing direct communication between Havana and Santa Clara. On November 6 the railroad between Holguin and Gibára went into operation.

In May authority was given to the Juragua Iron Company (limited) to build a narrow-gauge railway between the Juragua mines and Santiago de Cuba.

New Steamship Line.—In March the Catalan Company of Havana established a new line of steamships, under the Spanish flag, between that city and New York.

New Mail Route.—In June a daily mail line was established between New York and Havana—by rail to Tampa, and thence to Key West and Havana by steamer.

Yellow Fever.—During the year Dr. Cárlos Finlay, of Havana, experimented on the inoculability of yellow fever. The disease was found to be transmissible only from the third to the sixth day. Out of eleven inoculations, six were successful, one doubtful, and four negative. The inoculations were brought about by the use of mosquitoes, which were first caused to sting patients suffering from the fever, and afterward allowed to sting persons whom it was intended to inoculate. Whatever may be the result of Dr. Finlay's inoculatory experiments against yellow fever, the ease with which a disease may be transmitted by the sting of an insect is an important addition to the history of zymotic diseases.

Patriotic Contributions.—Throughout the year, in spite of the dull times and gloomy aspect of affairs, both Spaniards and Cubans liberally contributed their share toward alleviating the sufferings of their fellow-subjects in the Peninsula. Large amounts of money were sent to the sufferers by the earthquakes at Granada, Malaga, and vicinity, and in the summer and autumn to those from cholera. When German encroachments in the Caroline Islands threatened the friendly relations between the two countries, private funds were immediately raised in Cuba for building a man-of-war, and for strengthening the coast defenses.

The American Consul-General at Havana is Mr. Ramon O. Williams.

CURRENCY, BIMETALLIC. Gold and silver have been chosen by the universal consent of mankind in the past as the materials best suited for money, and until late years it has been a matter of indifference which metal was used, because both have remained more or less stable in value. Since 1850, however, the relations of these two metals have been seriously disturbed, and we have consequently heard of the difficulties to which they have given rise, so that from this discussion has come the theory of bimetallism. It aims to keep in concurrent circulation both gold and silver at some fixed ratio, and proposes that both gold and silver shall, at that ratio, have unlimited legal-tender power. Advocates of this theory hold that, if several states were to agree upon a common ratio, this could be maintained without a fall in either metal. This implies that the Government should permit "free coinage" of both metals. Free coinage is the privilege given to any person to bring bullion to the mint to be coined at the legal rate. For example, if the mint ratio is 16 : 1, every person having silver or gold bullion is permitted to have it coined (by paying the usual charges, or seigniorage) into coins in which there are sixteen times as many grains of pure silver as of pure gold in equivalent denominations. When only the Government is permitted to coin either metal, then free coinage does not exist. Bimetallism, moreover, implies that both gold and silver should be unlimited legal tender in payment of public and private debts. This does not permit any one to buy an article by offering legal-tender money, but only permits a person to pay existing debts with that money. Originally money was an artificial invention to obviate the inconvenience of barter, and the courts later were obliged in suits between debtor and creditor to decide what was a legal satisfaction for the debt. A legal-tender law should properly carry out the preferences of the community, and make as a legal means of payment only that which is sanctioned by general use.

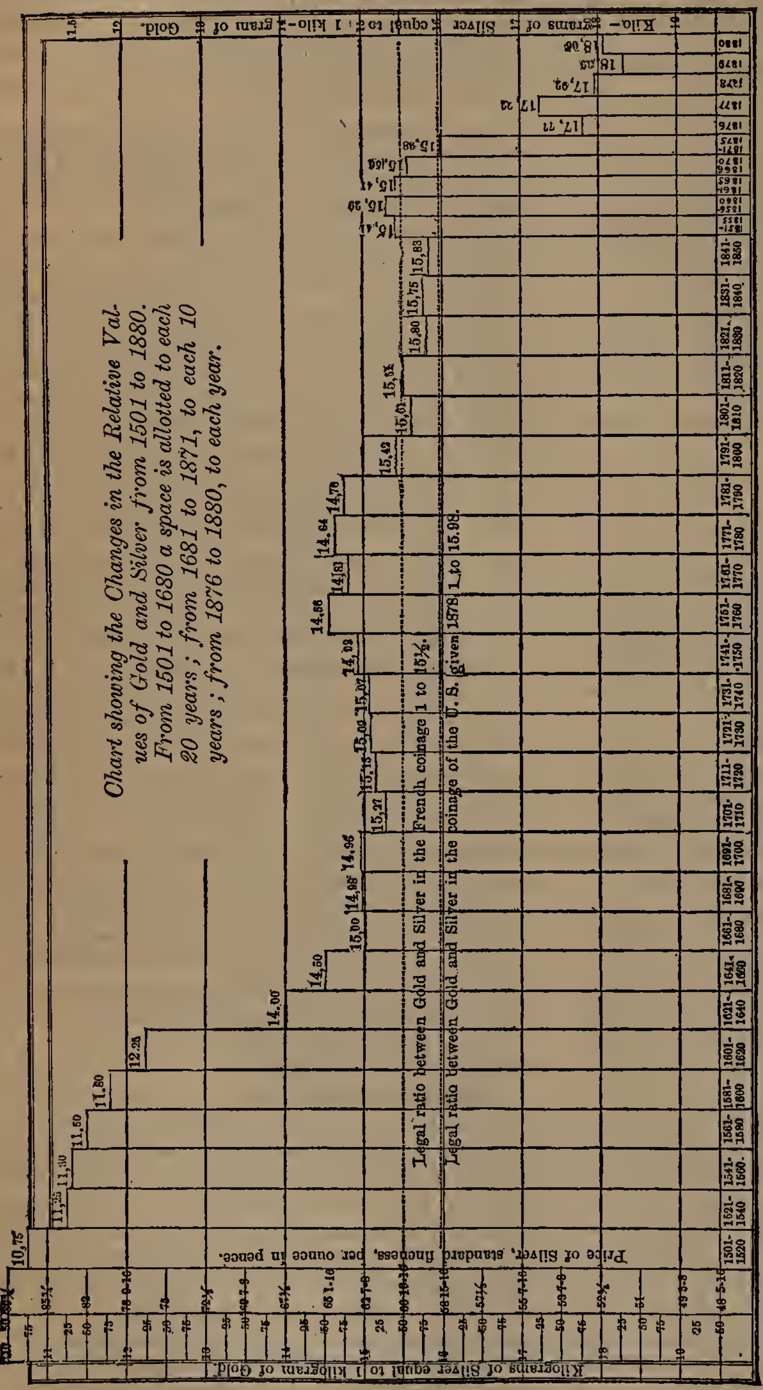


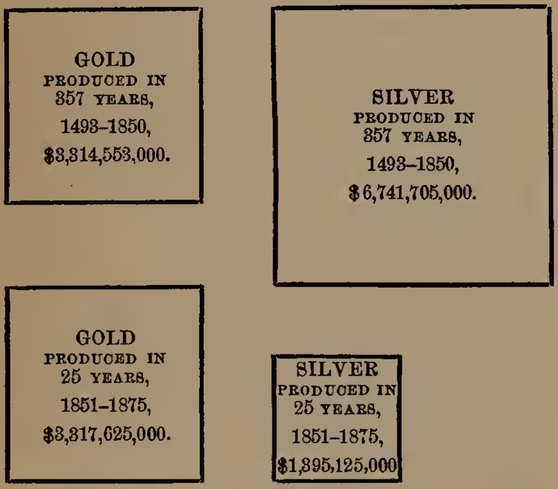
Chart showing the Changes in the Relative Values of Gold and Silver from 1501 to 1880. From 1501 to 1680 a space is allotted to each 20 years; from 1681 to 1871, to each 10 years; from 1876 to 1880, to each year.

Bimetallism depends on the possibility of keeping the ratio between gold and silver in the bullion market, and in the legal proportion, the same. Its advocates hold that a demand might be created by law sufficient to keep these ratios the same; that if many states should open their mints to free coinage, the demand thereby created for a metal that showed a tendency to decline in value would keep it from falling. On the other side, it is pointed out that in 1850 there was generally free coinage of silver, at least in the United States, Germany, France, and the various states on the Continent; but that in spite of it a serious fall in silver has taken place. Opponents of bimetallism assert that natural causes are constantly in operation whose force can not be nullified by the artificial action of law in creating a demand. They show that the market ratio between gold and silver, which depends on general forces, independent of law, has never remained for any length of time the same as the legal ratio; and they declare that, for this reason, no case is known where gold and silver have been maintained for any length of time in concurrent circulation. The accompanying chart will show what have been the facts as to the fall in the ratio of silver to gold from 1500 to 1880. The ratio is now 1 : 20.

Whenever two metals are both legal tender, as soon as there is a difference between the market and the mint ratios, Gresham's law comes into operation. For example, our present silver dollars are coined at a ratio to gold coins of 1 : 16 (more exactly, 1 : 15·988), so that sixteen ounces of silver, when coined, are made into as many dollars as one ounce of gold. But in the bullion market, in which gold and silver are exchanged for each other as other articles of merchandise, it now requires twenty ounces of silver to buy one ounce of gold; that is, the market ratio is 1 : 20. If we had free coinage, Gresham's law would begin to operate with great rapidity. That law is, "The cheaper metal drives out the dearer." The reason is, because there is a profit in it to money-brokers. A man having an ounce of gold can take it either to the mint to be coined, or to the bullion market; if to the former, the gold coin will exchange for but sixteen ounces of silver coin; if to the latter, it will exchange for twenty ounces of silver bullion. He will gain by selling his gold as bullion; for on buying twenty ounces of silver with his one ounce of gold, he can retain four ounces as profit, take the remaining sixteen ounces to the mint, and have it there put into the form of silver coin, which (as long as any gold coins remain in circulation), when passed from hand to hand for gold coins, will give him an ounce of gold in gold coins. He can then melt his ounce of gold coin, sell it as bullion for twenty ounces of silver bullion, and again repeat his operation. This will go on so long as any gold coins remain in circulation. It is, then, more profitable to use gold as bullion than as coin, while it is more profitable to use silver as coin than as bullion—so that, by Gresham's law, the cheaper metal, silver, will drive out of circulation the dearer metal, gold. The difference between the market and mint ratios need be but slight to set in motion the force that will drive one metal out of use. Unless the legal ratio be constantly changed to suit the market ratio, it is evident that only one metal will be in use. This would not be a bimetallic currency, but a monometallic currency, composed alternately of whichever metal happened to be the cheaper.

It has been urged, however, by advocates of bimetallism that a double standard creates a compensatory action by which a fall in either metal is at once counteracted. When the value of one of the legal-tender metals falls, the other will be at a premium, and the cheaper metal will drive out the dearer. The demand for the cheaper metal will, it is said, keep its value up, while the withdrawal of demand from the dearer metal will cause its value to fall. This "equilibratory" action, it is said, will make the medium of payments more stable during periods of long contracts; that "the desire of every debtor to meet his maturing obligations in the cheapening metal" will work to counteract the force that is lowering its value. The very fact of the increased demand for the cheapened metal implies a lessened demand for the dearer one. On the other hand, it is argued that the demand for the cheapening metal arises solely because it is cheaper, and that as it tends to rise in value to its former position the demand for it will fall off; so that it can not rise wholly to the level it held before. But as the dearer metal falls to meet it, the relative values may, conceivably, be the same as before, while both metals have become cheaper as regards other commodities. That is, the cheaper metal, under the compensatory theory, would drag down the dearer with it, until both resumed the same relative positions on a plane of lower value. In short, the compensatory action, under every event that cheapened either metal, would invariably lower the standard of deferred payments, or the amount to be paid at the maturity of long contracts. In addition to this, it is urged, in regard to the compensatory action, that, although it does not expose prices to the extreme fluctuation of both metals, yet it does expose prices to more frequent fluctuations than would be the case with but a single standard; and that each of these frequent fluctuations must, in order that any "compensation" may be felt, be such that one metal would be driven out of circulation, for only when the demand is centered on one metal and withdrawn from the other can any equilibratory force be shown. So that it is urged that the compensatory action can be effective only by alternately changing the standard of prices from silver to gold or from gold to silver. If countries are asked to join an international league in order, by the compensatory action, to maintain the relative value of gold to silver, it means that states must submit to seeing the cheapened metal drive out the dearer. A country which, by virtue of its large wealth, great transactions, and habits of trade, had found gold more convenient than the heavier and cheaper silver, would scarcely submit to this. Such economic difficulties make agreements on a given ratio by an international monetary league almost impossible. The political difficulties are serious enough.

Still further it is urged that if silver is demonetized, as it has been by Germany, it will greatly increase the demand for gold, and so increase its value that there will be a disastrous fall in prices; in short, that there will not be enough gold to satisfy the needs of trade. This idea appears of late in the assertion that there has been an "appreciation" of gold. It is sometimes believed that the stock of gold in the world is insufficient for the needs of commerce, and that the annual production is falling off. To this it is replied that the stock of gold has been increased since 1850 to such an extent that a large amount of the new supply (to 1883, about $4,233,000,000) has been made available for money uses; that this great sum has been absorbed into the circulation of countries before using silver; and that silver has been thrust out of use by some nations, only because of the opportunity which has been afforded of taking gold in place of silver. The increased gold supply found its market in being coined into money, and in this capacity it was in direct competition with silver; and as the preferred metal, when either could be had, the gold was accepted, and silver was willingly given up. Such, it is said, has been the cause of the demonetization of silver in recent years; and as it has gone on only as the place of silver was occupied by the rising tide of gold, it does not imply any increase in the value of the latter; that the willingness of all countries to take gold in preference to silver has only saved gold from falling instead of silver. The increased quantity of either metal, if both are used for the same purpose, must result in a decline of value somewhere; and if the desires of mankind are best satisfied by the gold, they will let silver go, and let it take care of itself, whether its value falls or not. If flour and oatmeal are both used for food, and if flour becomes abundant, so that people formerly using oatmeal can have the more agreeable food, there will be less demand for the poorer article. That is, an increase in the supply of the better of two articles used for the same purpose, will result in a fall in the value of the poorer.



That the increase in the supply of gold since 1850 has been greater in proportion than silver can be seen by the annexed diagrams, which show the relative production of gold and silver from the discovery of America to 1850, and the same from 1850 to 1875. It will be seen from this that, in twenty-five years after 1850, as much gold was produced in the world as had been produced in the 357 years from the discovery of America to 1850. This vast addition to the gold supply has produced great perturbations in the monetary world, and has had no little influence on the value of silver itself. The diagrams give the production only to 1875, because in the next year came the great fall in the value of silver. The following are the figures of the average annual production of gold and silver as they are given by Dr. Adolf Soetbeer:

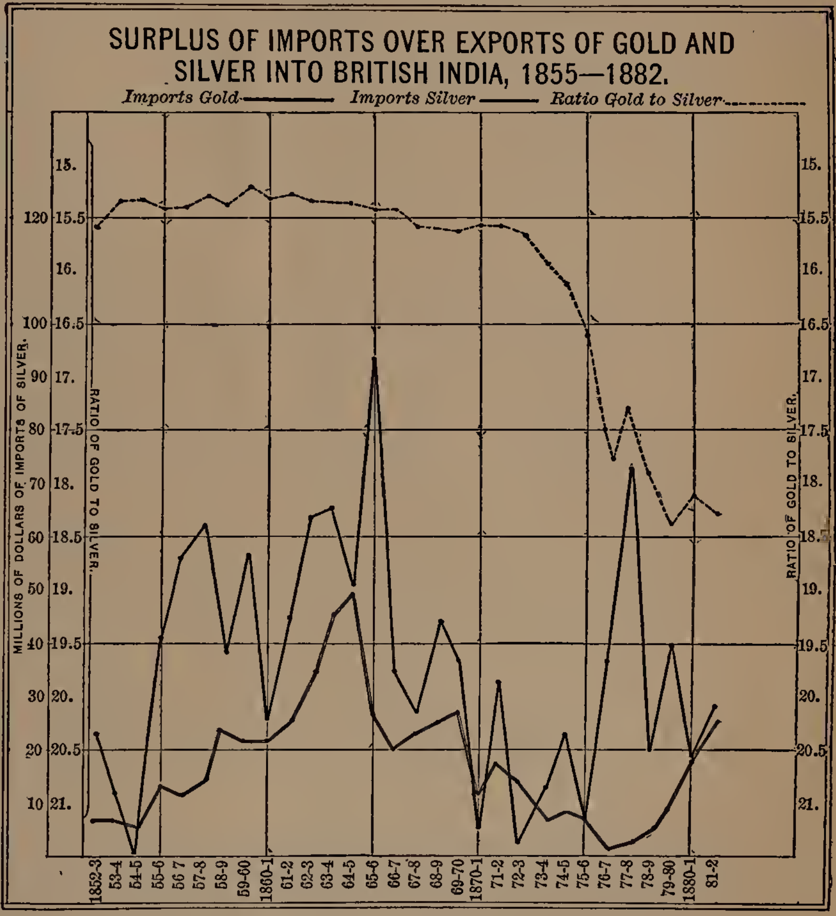
YEARS.	Silver.	Gold.
1493–1520	$2,115,000	$4,045,500
1521–1544	4,059,000	4,994,000
1545–1560	14,022,000	5,985,400
1561–1580	13,477,500	4,770,750
1581–1600	18,850,500	5,147,500
1601–1620	19,030,500	5,942,750
1621–1640	17,712,000	5,789,250
1641–1660	16,483,500	6,117,000
1661–1680	15,165,000	6,458,750
1681–1700	15,385,500	7,508,500
1701–1720	16,002,000	8,942,000
1721–1740	19,404,000	13,308.250
1741–1760	23,991,500	17,165,500
1761–1780	29,383,250	14,441,750
1781–1800	39,557,750	12,408,500
1801–1810	40,236.750	12,400,000
1811–1820	24,334,750	7,983,000
1820–1830	20,725,250	9,915,750
1831–1840	26,840,250	14,151,500
1841–1850	35,118,750	38,194,250
1851–1855	39,875,000	137,775,000
1856–1860	40,725,000	143,725,000
1861–1865	49,550,000	129,125,000
1866–1870	60,250,000	133,850,000
1871–1875	88,625,000	119,050,000
1876–1880	112,500.000	119,975,000
1881	113,475,000	112,925,000
1882	118,525,000	108,000,000
1883	130,298,250	100,398,250

It will be seen that even in 1883 the gold product was 2½ times as great as in 1841–1850, although it is not as high as in the exceptional period from 1851–1860. From 1493 to 1883, of the total production of gold, 56·1 per cent. of it was produced in 1851–1883; while of the total silver produced in the same period, only 25·6 per cent. was produced in 1851–1883. These facts do not seem to indicate any reason for thinking that the production of gold of late years has been inadequate. And the value of gold is determined by the relation between the total supply (not the annual supply) and the total demand of the world; and as the stock now available is increased by the $4,233,000,000 produced in 1851–1883, the fear of a gold famine is hardly justified. Additional demands for gold have only been sufficient, if that, to prevent its value from falling. But when silver is produced in large quantities, it does not follow that it will be adopted instead of gold, in the way that the gold has been adopted instead of silver. This shows the different ways in which gold and silver are viewed as regards their commercial and monetary uses. Increase the supply of gold, and an increased field for its employment will be found among commercial nations; but increase the quantity of silver, and the world will not give up gold to make room for it. Consequently, silver falls in value.

As soon as the new gold supply produced a change in its value relatively to silver (the ratio falling below 1 : 15½), France began to receive gold and expel silver. Since 1803 France had had a bimetallic system at a ratio of 1 : 15½. Of course, when the market value changed after 1803, so that the ratio ran up to 1 : 15·7, silver drove gold out of circulation in accordance with Gresham's law, and the chief currency of France to 1850 was virtually silver. After 1850 the reverse was true. The cheapened gold changed the ratio until it fell below 1 : 15½;

consequently, by Gresham's law, the cheaper gold drove out the dearer silver. This took place on a large scale, and from 1852 to 1864 France imported $680,000,000 of gold, and exported $345,000,000 of silver. After 1865 the monetary policy of France is connected with that of the Latin Union, which was formed in that year, and of which France was the leading state.

The silver that France discarded was mostly sent to India and the East. In fact, Oriental countries have always had a seemingly unsatisfied demand for silver. The semi-civilized people of these countries, with their insatiate passion for ornament, deck their women and children with all the silver decorations their wealth will buy. A silversmith goes about from house to house, melting up coins, and making ornaments for the inmates. India, moreover, with a population of 237,000,000, has no small demand for silver as a medium of exchange, or money. A semi-civilized nation will always use the least valuable metal, silver, because the articles commonly bought and sold will be of comparatively small value. With Eastern nations, therefore, trade is carried on chiefly by silver payments. From 1854 to 1867 the shipments of silver to India were abnormally large, for unusual reasons, and so all the surplus of silver discarded by France found a market, and thereby India saved silver at that time from an impending fall in value. The accompanying chart will show the movement of silver to India, from 1852 to 1882. Since 1867 the balance due to India has fallen off, because of an increase of remittances from India to London. Indian taxes are levied in silver, and so the India Council in London draw bills of exchange on this amount of taxes. The taxes due from India to London, the interest on her debts, pensions, etc., have increased the sum to be paid by India to $75,000,000 in 1876, and to this extent shipments of silver from London have been obviated. That is, India Council bills, when sold, save the shipment of silver from the West. Therefore, when any further attempts after 1870 were made to give up silver, India was unable to import as much as she did from 1854 to 1867, and could not as then hold up the value. But it will be seen by the chart that imports of silver into India fell off some years before the fall in the value of silver (since 1872).


SURPLUS OF IMPORTS OVER EXPORTS OF GOLD AND SILVER INTO BRITISH INDIA, 1855—1882.

Germany, after the consolidation of the empire at the close of the Franco-Prussian War, decided to establish a uniform currency in all her states. Furnished with $50,000,000 of gold from France, and with the means given her by the indemnity paid by France, she accumulated from England, and elsewhere, enough gold to warrant her in making a great change in her coinage from silver to gold. With $23,000,000 of old gold coins, and a new amount of $414,000,000 (the additional sum coined to 1880), a single gold standard was established. This was accomplished by a temporary bimetallic currency by the act of Dec. 4, 1871, which created a gold coin of full legal-tender value at a ratio of 15½ : 1 with existing silver coins; and the coinage of large silver coins was discontinued. The act of July 9, 1873, continued the policy by establishing a single legal standard of gold, and a subsidiary coinage of silver, overvalued about 11 per cent., after the principle of that of the United States. The silver, which formerly constituted the sole medium of exchange, was ordered to be withdrawn. In

1870 an amount of $375,000,000 was outstanding, of which about $270,000,000 have been withdrawn, leaving about $105,000,000 still outstanding. Of the amount withdrawn, only $141,000,000 has been sold as bullion in the open market, to May, 1879, when sales were suspended by the German Government. About $106,000,000 of the old silver was, by 1880, recoined in small denominations, and this amount will probably be increased, because of an increase of population.

The presence of the new gold has thus had a great effect on the currencies of France and Germany. Both gold and silver being used as money, an increase in the one displaces the other and less preferred metal. Silver began to fall as early as 1872, inasmuch as India and the East could not take as large an amount as before. This tendency received another stimulus from the action of the Latin Union. The process already described, by which France allowed gold to displace silver from 1852 to 1865, acted in the same way in all the countries that used the franc system — Belgium, Switzerland, and Italy. And, as at that time the smaller coins were of the same standard as the five-franc pieces, whenever it became profitable to displace the large silver coins, the small ones also disappeared. This difficulty was met (just as in the United States in 1853) by reducing the standard of the small coins. But the several countries did not adopt the same standard. Switzerland chose ·800 and France ·835, and the cheaper Swiss coins drove out the dearer French coins, since both were received equally in the two countries. Such difficulties brought the suggestion from Belgium for some uniform system of coinage, which was followed by the establishment, through a treaty signed Dec. 23, 1865, of the Latin Monetary Union, "so far as regards the weight, fineness, diameter, and circulation of their gold and silver coinage." Desired at first to secure a uniform subsidiary currency, the convention extended to all their coins. Their gold and silver coins, down to and including the five francs, were all to be ·900 fine ($\frac{9}{10}$ pure), and the silver pieces below five francs to be ·835 fine. The ratio of 1 : 15½ was retained, and any one could bring either gold or silver bullion to be coined at the mints. As soon, however, as silver began to fall in value after 1872, the market ratio diverged from the legal ratio, and it was evident that, if "free coinage" were allowed, silver alone would be presented to the mints and gold withdrawn from circulation. In November, 1873, the market ratio was 1 : 16. To prevent the loss of their gold, which had come in since 1850, the Latin Union, Jan. 30, 1874, promptly suspended "free coinage" of silver, and, as silver continued to fall in value until the extraordinary panic in the silver market in 1876, they were led in 1878 to cease all coinage of silver whatever. So that to-day the mints of the Latin Union are closed to silver.

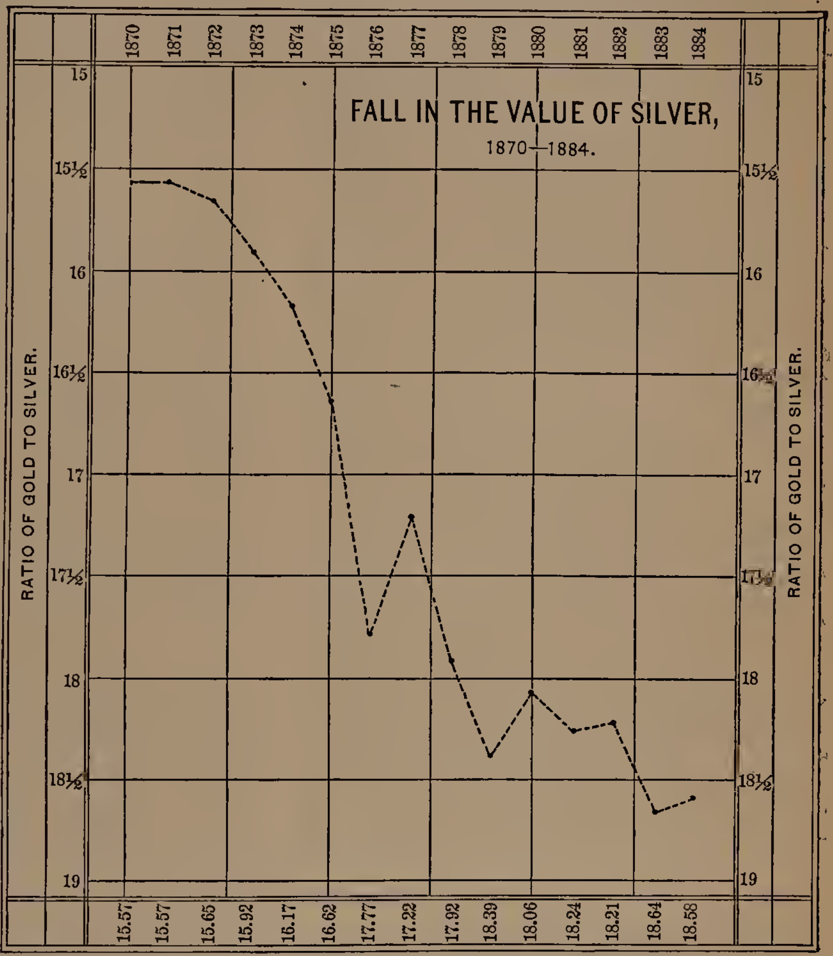
In July, 1876, the fall of silver, which began in 1872, reached its lowest recorded price of 46¾*d.*, indicating a ratio of gold to silver of 1 : 20·17 (found by dividing 943 by the price in pence). As compared with 60¼*d.*, the average price in 1872, this is a fall of 22 per cent. It may be asked, however, whether this was a fall in silver or a rise in gold, since silver is quoted in gold prices. Of course, if the purchasing power of gold remained unchanged during this time, this fall in the gold price of silver would indicate a fall not merely in relation to gold, but to all other commodities. The movement of prices at this time may be seen by the following portion of the figures given annually by the London "Economist":

YEARS.	Index number.	YEARS.	Index number.
1845–50..........	2,200	1870............	2,689
1857, July 1.....	2,996	1871............	2,590
1858, Jan. 1.....	2,612	1872............	2,835
1865............	8,575	1873............	2,947
1866............	3,564	1874............	2,891
1867............	3,024	1875............	2,778
1868............	2,682	1876............	2,711
1869............	2,666	1877............	2,723

It will be seen from this table of index numbers that prices were as high in 1876 and 1877 as they were in 1875, and even higher than they were from 1868 to 1871. It is true, therefore, that, so far as these prices show anything, the fall in the value of silver was a fall relatively to all commodities, and not gold alone. The chart on page 281 will show the movement of the value of silver from 1870 to 1884. The line shows the movement of the average prices for each year, without giving the ups and downs in each year. During the month of September, 1885, the price fell to 47*d.*, which is a price not produced by a panic, but is the result of more or less permanent causes. So that the ratio of gold to silver in the market is now more than 1 : 20. The following table will give the average prices for the year, and the corresponding ratios, from Pixley and Abell's tables since 1833:

YEAR.	Price per oz. in pence.	Ratio.	YEAR.	Price per oz. in pence.	Ratio.
1833....	$59^{3}/_{16}$	15·93	1859....	$62^{1}/_{16}$	15·19
1834....	$59^{15}/_{16}$	15·73	1860....	$61^{11}/_{16}$	15·29
1835....	$59^{11}/_{16}$	15·80	1861....	$60^{13}/_{16}$	15·26
1836....	60	15·72	1862....	$61^{7}/_{16}$	15·35
1837....	$59^{9}/_{10}$	15·83	1863....	$61^{3}/_{8}$	15·37
1838....	$59^{1}/_{2}$	15·85	1864....	$61^{3}/_{8}$	15·37
1839....	$60^{3}/_{8}$	15·62	1865....	$61^{1}/_{16}$	15·44
1840....	$60^{3}/_{8}$	15·62	1866....	$61^{1}/_{8}$	15·43
1841....	$60^{1}/_{16}$	15·70	1867....	$60^{9}/_{16}$	15·57
1842....	$59^{7}/_{16}$	15·87	1868....	$60^{1}/_{2}$	15·59
1843....	$59^{3}/_{16}$	15·93	1869....	$60^{7}/_{16}$	15·60
1844....	$59^{1}/_{2}$	15·85	1870....	$60^{9}/_{16}$	15·57
1845....	$59^{1}/_{4}$	15·92	1871....	$60^{1}/_{2}$	15·57
1846....	$59^{5}/_{16}$	15·90	1872....	$60^{5}/_{16}$	15·65
1847....	$59^{11}/_{16}$	15·80	1873....	$59^{1}/_{4}$	15·92
1848....	$59^{1}/_{2}$	15·85	1874....	$58^{5}/_{16}$	15·17
1849....	$59^{3}/_{4}$	15·78	1875....	$56^{7}/_{8}$	16·62
1850....	$60^{1}/_{16}$	15·70	1876....	$52^{3}/_{4}$	16·77
1851....	61	15·46	1877....	$54^{13}/_{16}$	17·22
1852....	$60^{1}/_{2}$	15·59	1878....	$52^{9}/_{16}$	17·92
1853....	$61^{1}/_{2}$	15·33	1879....	$51^{1}/_{4}$	17·39
1854....	$61^{1}/_{2}$	15·33	1880....	$52^{1}/_{4}$	18.06
1855....	$61^{5}/_{16}$	15·38	1881....	$51^{11}/_{16}$	18·24
1856....	$61^{5}/_{16}$	15·38	1882....	$51^{5}/_{8}$	18·27
1857....	$61^{3}/_{4}$	15·27	1883....	$50^{9}/_{16}$	18·64
1858....	$61^{5}/_{16}$	15·38	1884....	$50^{5}/_{8}$	18·58

The United States, perhaps, presents the best illustration of a bimetallic currency, and her experience is very instructive. Under the leadership of Hamilton, Congress adopted a system of bimetallism in 1792, at the beginning of our monetary history. It was an example of strict bimetallism; that is, an attempt to select a legal ratio that should be in accord with the market ratio, and so to secure the concurrent circulation of both gold and silver. No scheme can be called bimetallic which does not have this in view. The legal ratio chosen was 15 : 1; so that fifteen times as many grains of pure silver should be found in a dollar of silver as of pure gold in a dollar of gold. And it so happened that, in the bullion market, one grain of gold exchanged for fifteen grains of silver. Thus the market and mint ratios coincided, and had there never been any divergence both gold and silver would have continued to circulate side by side. But the ratio of silver to gold changed, because of a serious fall in the value of silver due to the extraordinary production from the Mexican mines between 1780 and 1820; and even after the production fell off, the effects of the past production on the total supply still kept its value down. By 1806 the market was so far from the mint ratio that silver had begun to drive gold out of circulation, and by 1818 the absence of gold was the cause of general remark, and the subject of a resolution introduced into Congress. So that only for a few years after 1792, during which the market ratio coincided with the mint ratio of 15 : 1, could gold have circulated equally with silver. But, in fact, very little gold was ever in circulation during this time.



In 1834, after discussion and reports to Congress for fifteen years, new legislation was reached, which changed the legal ratio from 1 : 15 to 1 : 16. The market ratio during this time remained about 1 : 15·7, so that the legal and market ratios were not the same, as had been the case in 1792. It was believed by some that as the value of silver was falling, a further fall should be anticipated by putting the legal ratio beyond the market ratio; but the real reason, probably, was that Benton and the anti-bank party wished a ratio of 1 : 16, which, by overvaluing gold, would bring it into circulation. The change was brought about by leaving the silver dollar of the same weight, and by reducing the grains of pure gold in the equivalent of a dollar from 24·75 grains to 23·2 grains, a reduction of about 6 per cent. This has been regarded by some writers as a debasement of our standard, since the silver coin that was retained as the standard had fallen in value, as before explained.

In 1837 a change was made in the amount of alloy in the coins. Since 1792, the gold coins had contained $\frac{1}{12}$ alloy, and the silver about $\frac{1}{9}$ alloy (that is, 371¼ grains pure out of 416 grains standard weight). The act of 1837 established the common fineness of $\frac{9}{10}$, or ·900, for both gold and silver coins, by which the silver dollar kept the same amount of pure silver in it, but weighed 412½ grains of standard weight.

After 1834 gold began to drive out silver, and the increasing product of the mines of Russia, California, and Australia, by cheapening gold, continued the movement, so that the United States was soon denuded of all its silver, even of the small coins. Since 1792 the subsidiary silver coins had been of weights proportional to the dollar-piece; that is, two half-dollars had contained 371¼ grains of pure silver. So that when it was profitable to withdraw silver dollar-pieces, it was equally profitable to withdraw silver coins of less denomination. By 1849 no silver was to be had. This led to the act of 1853, by which the silver small coins were overvalued. The silver in 100 cents of subsidiary coins was reduced from 371¼ grains to 345·6 grains; their legal-tender power changed to only $5; and their amount left to the discretion of the Secretary of the Treasury. The silver dollar-piece, which was worth 104 cents in gold, remained untouched. It had not been in circulation, and ordinary payments were made in gold, the only coin in use. This act, therefore, made no attempt to establish bimetallism, but remained content with a metallic currency composed solely of gold, and a subsidiary coinage of overvalued silver.

In 1873, finding that no silver dollars had been in circulation since 1840, and that they were worth more than 100 cents in gold, Congress, in making a codification of mint laws, discontinued the coinage of the silver dollar of 371¼ grains (or 412½ standard weight); and, in the following year, by the adoption of the Revised Statutes, the unlimited legal-tender quality was taken away from it. From this time, therefore, until 1878, the United States had but a single legal metal, and that gold, for payments beyond $5.

The same act also created the trade-dollar, in 1873, which was inadvertently included in the list of subsidiary coins and given a legal-tender quality for sums of $5, but this was corrected in 1876. The trade-dollar was not a coin, but a coined ingot. Its purpose was to aid in the trade with China and the East. As before explained, these countries prefer silver, and until 1873 Mexican dollars had been bought for shipment to China by our merchants. Congress now simply gave permission to holders of bullion to have 378 grains of pure silver put into the form of a round disk like a coin, with the Government stamp on it to certify its weight and fineness, and they paid the United States the expense of coinage. The trade-dollar of 378 grains of pure silver (420 grains with alloy) was heavier than the Mexican dollar, and preferred to it in the East. But, when the value of silver fell in 1876, the 378 grains became not only of less value than the gold dollar, but also of less value than United States notes, and came into circulation at home. They were, therefore, discontinued by law, after 35,959,360 had been coined (to 1878).

In 1878 the passage of the so-called "Bland bill" established the old ratio of 1:16 (or since 1837, more exactly, 1:15·988) between gold and silver coins, and required that silver dollars of 412½ grains standard weight should be coined at the rate of at least $2,000,000, and not more than $4,000,000, a month. These silver dollars were made an unlimited legal tender for public and private debts. The original bill contemplated "free coinage," or the right of any one to present silver bullion for coinage; but this was stricken out, and the amount to be coined was limited as above. This scheme is in no sense bimetallic. In 1878, when the act was passed, the market ratio of gold to silver was 1:17·38, while the legal ratio established was 1:16. This fact, consequently, makes the act a provision ultimately for a single standard of silver alone; for, if free coinage had been allowed, the difference between the mint and the market ratio would, in a few months, have driven out gold; and, under the restricted coinage, the same thing will result in the end, although delayed by the fact of the smaller coinage each month. The Bland bill really aims at silver monometallism.

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DAKOTA. Territorial Government. — The following were the Territorial officers during the year: Governor, Gilbert A. Pierce; Secretary, J. H. Teller, succeeded by M. L. McCormack; Treasurer, W. H. McVay, succeeded by J. W. Raymond; Auditor, G. L. Ordway, succeeded by E. W. Caldwell; Superintendent of Public Instruction, W. H. H. Beadle, succeeded by A. S. Jones; Attorney-General, Alexander Hughes, succeeded by George Rice; Commissioner of Immigration, Lauren Dunlap; Railroad Commissioners, William M. Evans, Alexander Griggs, and William H. McVay. Judiciary, Supreme Court: Chief-Justice, Alonzo P. Edgerton, succeeded by Bartlett Tripp; Associate Justices, William E. Church, Sandford A. Hudson, succeeded by William B. McConnell; Seward Smith, succeeded by Louis K. Church; William H. Francis, and C. S. Palmer.

Legislative Session. — The Legislature met at Bismarck on the 13th of January, and adjourned on the 13th of March. The following were the chief acts of the session:

To create a Territorial Department of Agriculture, and relating to agricultural societies and fairs, and providing for reports of the same.

To regulate caucuses or primary meetings in the Territory.

Providing a method for changing the names of towns and villages.

Relating to the foreclosure of chattel mortgages.

To provide for the incorporation and regulation of building and loan associations.

Relating to proofs of the existence of corporations.

To provide for the organization of new counties.

To insure the better education of practitioners of dental surgery, and to regulate the practice of dentistry in the Territory.

To provide for taking depositions in criminal cases.

To provide for contesting elections for county officers, and for the location of county-seats.

To regulate the receiving and transportation of fuel on railroads in the Territory.

Two acts relating to the public health.

Creating the office of Commissioner of Immigration.

Authorizing the formation of county mutual-insurance companies.

Providing for struck juries.

In regard to the selling and smoking of opium.

Relative to dealing in passage tickets.

Establishing a School of Mines at Rapid City.

To provide for the appointment of sheep-inspectors.

To provide for ascertaining the acreage of timber in the Territory.

To promote the planting of forest-trees upon the prairies of the Territory.

To provide a standard of weights and measures for the Territory.

Acts creating Adams, Blaine, Marshall, Eddy, Winona, Garfield, Stanton, and Ward counties.

A joint resolution and memorial to Congress in favor of dividing the Territory and admitting the southern portion as a State.

An act was also passed providing for the taking of a census of the Territory in June. Another act provided for a Constitutional Convention for that part of the Territory south of the 46th parallel of latitude, to meet at Sioux Falls, on Sept. 8. The convention is made to consist of one hundred and eleven delegates, to be elected on June 30. Other acts establish a Railroad Commission, to regulate the receiving and transportation of freight on railroads in the Territory, and provide for the collection and compilation of statistics by the assessors and other officials. A bill to remove the Territorial capital from Bismarck to Pierre, supported generally by the South Dakota members, and opposed by those from North Dakota, was vetoed by the Governor. He also vetoed a bill establishing woman suffrage in the Territory.

The following appropriations, among others, were made: for the Public Hospital for the Insane, $97,470; Jamestown Hospital for the Insane, $58,000; Vermilion University, $35,950; North Dakota University, Grand Forks, $38,400; Sioux Falls Penitentiary, $67,200; Normal School, Madison, $14,000; School of Mines, $7,500; Agricultural College, Brookings, $25,500; North Dakota Penitentiary, Bismarck, to be used as a reform-school, $33,424, besides $14,900 for improvements from proceeds of bonds. The bill provides that the tax-levy shall not exceed three mills on the dollar, and "that no appropriation, provided for in this act for furniture, labor, steam-heating apparatus, or otherwise, shall in any way be construed as an indorsement by the Territory of the act of the Capitol Commission, or be construed in any manner as a ratification or indorsement of the acts of said commision in locating the capital of the Territory at Bismarck."

The Constitution.—The delegates chosen pursuant to the act providing for a Constitutional Convention for South Dakota, assembled at Sioux Falls, Sept. 8, and remained in session until the 25th, when, having completed a Constitution, and provided for its submission to the people, they adjourned.

The following are its principal provisions:

The number of members of the House of Representatives shall not be less than seventy-five nor more than one hundred and thirty-five. The number of members of the Senate shall not be less than twenty-five nor more than forty-five.

The sessions of the Legislature shall be biennial.

The Legislature first chosen is to consist of thirty-three Senators and ninety-nine Representatives.

No person who has been convicted of an infamous crime, or is a defaulter for public moneys, and with minor exceptions no person holding a lucrative office under the State, the United States, or any foreign government, can be elected to the Legislature. The terms of the office of the members of the Legislature shall be two years; they shall receive five dollars for each day's attendance during the session of the Legislature, and ten cents for every mile of necessary travel. Each regular session of the Legislature shall not exceed sixty, days except in cases of impeachment. The Legislature shall meet at the seat of government, on the first Tuesday after the first Monday of January, in the year next ensuing the election of members thereof.

No member of the Legislature shall, during the term for which he was elected, be appointed or elected to any civil office in the State which shall have been created, or the emoluments of which shall have been increased, during the term for which he was elected, nor shall any member receive any civil appointment from the Governor, the Governor and Senate, or from the Legislature, during the term for which he shall have been elected, and all such appointments and all votes given for any such members for any such office or appointment shall be void; nor shall a member of the Legislature, during the time for which he shall have been elected, or within one year thereafter, be interested, directly or indirectly, in any contract with the State or any county thereof, authorized by any law passed during the term for which he shall have been elected.

No law shall embrace more than one subject, which shall be expressed in its title.

The Legislature is prohibited from enacting any private or special laws in the following cases:

1. Granting divorces.
2. Changing the names of persons or places, or constituting one person the heir-at-law of another.
3. Locating or changing county-seats.
4. Regulating county and township affairs.
5. Incorporating cities, towns, and villages, or changing or amending the charter of any town, city, or village, or laying out, opening, vacating, or altering town plats, streets, wards, alleys, and public grounds.
6. Providing for sale or mortgage of real estate belonging to minors or others under disability.
7. Authorizing persons to keep ferries across streams wholly within the State.
8. Remitting fines, penalties, or forfeitures.
9. Granting to an individual, association, or corporation any special or exclusive privilege, immunity, or franchise whatever.
10. Providing for the management of common schools.
11. Creating, increasing, or decreasing fees, percentages, or allowances of public officers during the term for which said officers are elected or appointed.

But the Legislature may repeal any existing special law relating to the foregoing subdivisions. In all other cases where a general law can be applicable, no special law shall be enacted.

The Legislature shall have no power to release or extinguish, in whole or in part, the indebtedness, liability, or obligation of any corporation or individual to this State, or to any municipal corporation therein.

The Legislature shall not authorize any game of chance, lottery, or gift enterprise, under any pretense, or for any purpose whatever.

The Legislature shall not delegate to any special commission, private corporation or association, any power to make, supervise, or interfere with any municipal improvement, money, property, effects, whether held in trust or otherwise, or levy taxes, or to select a capital site, or to perform any municipal functions whatever.

The executive power is vested in a Governor and Lieutenant-Governor, elected for two years, the latter being *ex officio* President of the Senate. The Governor has a veto-power on legislation, which may be overridden by a two-third vote of both houses. He may veto items of an appropriation bill and approve the rest.

There shall be chosen by the qualified electors of the State a Secretary of State, Auditor, Treasurer, Superintendent of Public Instruction, Commissioner of School and Public Lands, and Attorney-General, who shall severally hold their offices for the term of two years, but no person shall be eligible to the office of Treasurer for more than two terms consecutively.

The judicial power is vested in a Supreme Court, circuit courts, county courts, and justices of the peace, and special courts for cities and incorporated towns. The Supreme Court, consisting of three judges elected from districts, has appellate and supervisory jurisdiction only. After five years from the admission of the State, the number of judges and districts may be increased to five. Those first elected are chosen for four years; subsequently the term is to be six years. The circuit courts are the courts of general original jurisdiction. The number of judges fixed by the Constitution is six, one elected in each circuit for four years. The Legislature by a two-third vote may increase the number of judges and circuits.

Every male person resident of the State, who shall be of the age of twenty-one years and upward, not otherwise disqualified, belonging to either of the following classes, who shall be a qualified elector under the laws of the Territory of Dakota at the date of the ratification of the Constitution by the people, or who shall have resided in the United States one year, in this State six months, in the county thirty days, and in the election precinct where he offers his vote ten days next preceding any election, shall be deemed a qualified elector at such election:

1. Citizens of the United States.
2. Persons of foreign birth who shall have declared their intention to become citizens, conformably to the laws of the United States upon the subject of naturalization.

The Legislature shall at its first session after the admission of the State into the Union submit to a vote of the electors of the State the following question, to be voted upon at the next general election held thereafter, namely: "Shall the word 'male' be stricken from the article of the Constitution relating to elections and the right of suffrage?"

Any woman having the qualifications enumerated in section 1 of this article, as to age, residence, and citizenship, and including those now qualified by the laws of the Territory, may vote at any election held solely for school purposes, and may hold any office in this State except as otherwise provided in this Constitution.

It is made the duty of the Legislature to establish and maintain a general and uniform system of public schools, wherein tuition shall be without charge, and equally open to all.

The sale, investment, and management of educational lands and funds are carefully guarded to secure them for the objects for which they were intended.

Corporate powers are restricted, and the right of the State over them is maintained. It is provided that the temporary capital shall be voted for at the time when the Constitution is voted on, and that the Legislature at its first session after admission shall make provision for a vote of the people on a permanent capital.

The real and personal property of any woman in the State, acquired before marriage, and all property to which she may after marriage become in any manner rightfully entitled, shall be her separate property, and shall not be liable for the debts of her husband.

A prohibitory article, and one providing for minority representation, were submitted to a separate vote.

The power of taxation, appropriating the public moneys, and of incurring indebtedness on the part of the State and localities, is restricted. Taxation for ordinary State purposes is limited to two mills on the dollar. The State debt is not to exceed $500,000.

The debt of any county, city, town, school district, or other subdivision, shall never exceed 5 per centum upon the assessed value of the taxable property therein.

The general appropriation bill shall embrace nothing but appropriations for ordinary expenses of the executive, legislative, and judicial departments of the State, the current expenses of State institutions, interest on public debt, and for common schools. All other appropriations shall be made by separate bills, each embracing but one object, and shall require a two-third vote of all the members of each branch of the Legislature.

The Legislature is compelled to tax corporations like individuals, according to the value of their property, by a uniform general law, which applies to corporations and individuals alike, and by the same method by which it taxes individuals. It is forbidden to surrender the power to tax corporations. It is also given power to prevent unjust discrimination or extortion, in freight and passenger rates, on the railroads.

Party Conventions.—The Republican State Convention was held at Huron on Oct. 21. The following nominations were made: Governor, Arthur C. Mellette; Lieutenant-Governor, A. E. Frank; Secretary of State, H. S. Murphy; Auditor, Frank Alexander; Treasurer, D. W. Diggs; Attorney-General, Robert Dollard; Superintendent of Schools, A. Sheridan Jones; Commissioner of School and Public Lands, W. H. H. Beadle; Representatives in Congress, T. D. Kanouse, O. S. Gifford; Judges of the Supreme Court, A. G. Kellam, D. Corson, and J. E. Bennett.

Among the resolutions adopted were the following:

> That we fully indorse the action of our last Territorial Legislature in calling a Constitutional Convention of South Dakota, and that we are in hearty accord with the action of that convention, and recommend the Constitution framed thereat to the people of the proposed new State of Dakota, and pledge our hearty support to its adoption at the polls.
>
> That the people of the proposed State of Dakota are firmly and unalterably opposed to any and all schemes for the admission of the Territory as a whole, and pledge our continued and loyal support of the division of the Territory on the forty-sixth parallel, and admission as a State, until recognized by Congress.
>
> That while this convention is met to put in nomination persons representing the Republican party, the entire movement to form and submit the Constitution was non-partisan, and the question of its adoption is addressed to the people in their individual and aggregate capacity, wholly free from party interest, and in no way obnoxious to party action; and we observe with regret the action of a Democratic conclave of this Territory, recently held at Mitchell, condemning the action of the Constitutional Convention at Sioux Falls.
>
> That this convention invokes the immediate action of Congress by wise and humane legislation, opening to actual settlement the great Sioux reservation, now an unoccupied wilderness, containing over 30,000 square miles within our borders, capable of furnishing homes to over 1,000,000 people, securing first to each Indian thereon land in severalty of his own selection, granting him full protection under our laws and liberal appropriations for his assistance, civilization, and education.

The platform also affirms the right of the people of the Territory to form a State government and demand admission.

The Democratic meeting at Mitchell placed its opposition to the Sioux Falls Constitutional Convention on the following grounds:

> The entire proceedings are revolutionary and antagonistic to the best interests of the people of Dakota.
>
> We deny the right of one part of the Territory to separate itself from the other without the expressed consent of the people of the whole.
>
> The attempt to force a recognition of a part of Dakota as a State, and appropriate the name of the whole for a part, is a proceeding unauthorized by law and a flagrant injustice to those of our citizens who are deprived of the privilege of being heard for or against the measure.
>
> The act passed by the last Legislature, authorizing the convention at Sioux Falls and appropriating $20,000 to defray the expenses thereof, was, in our judgment, unauthorized by the organic act of the Territory, or by any law of Congress, and therefore void.
>
> The fact that nine tenths of the voters of the proposed State declined to join in the election of delegates to said Constitutional Convention, indicates that the people are not in sympathy with the constitutional movement.
>
> We believe that the interests of the people of Dakota will be best subserved by awaiting the proper action of Congress in passing our enabling act, authorizing the holding of a State Convention to frame a State Constitution embracing such territory as the people, not the politicians, shall determine. We believe this action will be taken by the Congress soon to assemble. We therefore, as a committee, decline to call a Democratic Convention for the nomination of officers for the proposed State, believing, as we do, that the whole proceeding will prove to be a gigantic farce, and recommend that the Democrats of Dakota and all law-abiding citizens generally decline to take any part whatever in the proceedings.

Election.—It was provided by the convention that the vote on the Constitution and for the choice of officers should take place on Nov. 3, and that the Legislature should meet and the State officers take the oath of office on the second Monday of December, 1885, for the purpose of choosing United States Senators and taking action preliminary to securing admission as a State under the Constitution. The total vote cast on the Constitution was 31,791—to wit, 25,226 for and 6,565 against; majority for the Constitution, 18,661. For prohibition the vote was 15,570 against 15,337; majority for prohibition, 233. For minority representation, 11,273 votes were cast, and against it, 16,765; majority against minority representation, 5,492. Huron was selected as the temporary capital.

The nominees of the Republican Convention given above were elected. For Governor, Mellette received 28,994 votes; scattering, 226. The other candidates received about the same vote.

Progress during the Year.—The Governor, in his report to the Secretary of the Interior, says:

> The year has been a very prosperous one for the Territory. Not only have the crops been excellent, but the prices commanded have been much in advance of those of a year ago. Farmers are paying their debts, adding improvements to their farms, and extending their business so as to embrace nearly all departments of agricultural enterprise. In some cases there have been serious losses by storms and prairie-fires, and individuals have suffered severely; but as a whole the farmers of the Territory were never so prosperous as now.

Nearly 5,000,000 acres of land were disposed of by the Government and the railroads during the year.

Territorial Fair.—The first Territorial fair was held at Huron, and proved very successful. The display of grain, vegetables, sheep, swine, and poultry was large and varied, but the attractive features of the exhibition were the fine displays of blooded horses and cattle and the excellent array of fruits. The stock-raisers and farmers of the Territory seem to take an unusual interest in blooded cattle.

Banks and Banking Institutions.—The growth of banks and banking institutions has fully kept pace with the development of the Territory in other respects. The following table shows the number of such institutions, with their capital and surplus, in 1878, 1880, and 1885:

YEAR.	No. of banks.	National.	Private.	Capital.	Surplus.
1878	11	1	10	$70,000	....
1880	24	6	18	440,000	$73,579
1885	195	35	160	4,514,000	592,359

Railroads.—Surveys for new lines of railroad have been made during the year. A line running from Jamestown, on the Northern Pacific, to Minnewaukon, has been completed, and a line running south from Jamestown to La Moure will soon be finished. A branch of the Northwestern, extending from Centreville to Yankton, was expected to be in running order before the 1st of January, 1886. A road from Chadron, Neb., to Rapid City in the Black Hills, was to be completed to within forty-five miles of Rapid City in November. This road is called the Fremont, Elkhorn, and Missouri Valley Railroad. There are other lines on which more or less grading has been done; the total number of miles of railroad in the Territory completed at the close of the year was 2,700.

Public Institutions.—The public institutions of the Territory comprise: The insane hospitals, at Yankton and at Jamestown; the penitentiaries, at Sioux Falls and at Bismarck; the Capitol, at Bismarck; the University of Dakota, at Vermilion; the University of North Dakota, at Grand Forks; the Agricultural College, at Brookings; the normal schools, at Madison and at Spearfish, the Deaf and Dumb School, at Sioux Falls; the School of Mines, at Rapid City.

Denominational Schools and Colleges.—There are many denominational schools and colleges in the Territory, some of them having valuable buildings. Among them are: The university at Pierre (Presbyterian); the university at Mitchell (Methodist Episcopal); All Saints School, at Sioux Falls, founded by the Protestant Episcopal Church; Dakota Collegiate Institute, at Sioux Falls, under the control of the Baptist Church; Yankton College, under the management of the Congregationalists; the Academy of the Sacred Heart, also at Yankton (Catholic); St. Mary's Academy, at Bismarck, and St. Joseph's School (Catholic), at Mandan. A university has been located by the Baptist Association at Tower City, in Cass County, and is endowed with $100,000.

Manufactures.—The following table shows the number of manufacturing establishments, the capital employed, and the product. These are independent of the gold and silver mines of the Black Hills, the value of whose products amounts to about $5,000,000 annually:

INDUSTRIES.	No.	Capital.	Wages during year.	Value of products.
Flouring and grist mills	85	$2,189,400	$231,484	$3,182,864
Saw-mills	83	85,300	58,910	179,082
Planing-mills	9	50,800	31,445	97,175
Foundries and machinery	9	54,000	24,400	61,790
Creameries	16	63,737	33,190	329,157
Beef and pork packing	6	449,000	94,420	772,200
Breweries	17	528,150	71,992	392,095
Soda and mineral water	6	21,200	7,400	23,800
Brick	28	145,250	88,623	195,075
Coal-mining	4	75,500	38,300	71,200
Gold mining and stamping (one copper)	19	11,972,000	228,250	475,000
Railroad-car shops	6	625,000	251,272	315,000
Water-works (Fargo not included)	1	75,000	2,500	4,000
Gas-works	2	110,000	21,200	93,000
Electric-light works	2	50,500	6,100	22,500
All other industries, not including those which may be called "neighborhood industries"	14	182,700	218,850	879,780
The Territory	257	$16,677,537	$1,408,836	$6,593,218

The Militia.—Within the past eighteen months nineteen companies of militia, aggregating about 1,000 officers and men, and divided into two regiments, have been organized, uniformed, and equipped.

Statehood.—On this subject the Governor says:

> The last session of the Territorial Legislature provided for a Constitutional Convention for that part of the Territory lying south of the forty-sixth parallel, and in accordance with the act the convention has been held and a Constitution framed. As the instrument, if adopted by the people, will be presented to Congress by duly authorized persons, with an appeal for recognition from that body, I need not discuss the matter here further than to bespeak for them a kindly hearing and a candid consideration at the hands of the national Legislature. The instrument framed seems to meet the requirements of the Federal Constitution, and to be well adapted to the wants of the community to which it applies. The area of that section known as South Dakota is large enough for a separate State, comprising 75,000 square miles, being a third larger than Iowa, Illinois, or Wisconsin. Its population is sufficient, that part of Dakota possessing 263,000 inhabitants, mainly of the agricultural class, the census showing it to have more than 45,000 separate farms. There is abundant reason, therefore, for the creation of two States out of the Territory.
>
> But whatever may be done regarding division, every consideration of justice demands action of some kind on the part of Congress. There are nearly 100,000 voters in the Territory, not transient persons, but *bona fide* citizens. There are more than 90,000 children of school age, and between 60,000 and 70,000 of these children are in the public schools, while over $1,800,000 in the aggregate has been paid out for educational purposes in the last year. The property of the Territory assessed for taxation in 1885 amounts to $106,007,307; and when the fact is recorded that while the assessed value of town and city lots in the past year has risen only about $2,000,000, or 12½ per cent. in value, the value of farm property has increased $14,000,000, or 33 per cent., the undeniable evidences of a healthy and permanent growth are surely presented.

He calls attention to many difficulties growing out of the Territorial condition, and asks Congress to provide a remedy for them by legislation.

Indian Lands.—The Indian reservations located within the Territorial limits of Dakota are becoming sources of trouble and annoyance, both to the Government and to settlers on adjoining lands. The Sioux Reservation embraces about 34,000 square miles, and contains much of the finest agricultural and grazing lands in the Territory. A striking illustration of what the Indian can be brought to do is seen in the condition of those inhabiting the Sisseton Reservation. The total number of Indians there is 1,453. They reside upon separate tracts of land, and it is estimated that this year they have raised and harvested at least 40,000 bushels of wheat and 30,000 bushels of oats and barley. These Indians are self-supporting, and they maintain churches and schools, while the men work their farms instead of leaving this labor to the squaws as formerly. They all live in comfortable houses. Of the three hundred unmarried persons of school age that reside on the reservation, two hundred and fifteen are at school.

Finances.—The total bonded indebtedness of the Territory was $568,200. At the last session of the Legislature an issue of $176,000 additional 6 per cent. bonds was authorized. The bonds were advertised and sealed proposals were received, when it was found that the highest bid was 103·2, at which price they were awarded.

Census.—The census that was taken by the Territorial authorities in 1885 places in a strong light the rapid growth and the vast resources of Dakota. The following table gives the population by counties as it was in 1880 and in 1885:

COUNTIES.	1885.	1880.	Increase.
The Territory.........	415,610	*135,177	280,433
Allred....................	13	....	13
Aurora....................	5,950	69	5,881
Barnes....................	6,093	1,585	4,508
Beadle....................	10,318	1,290	9,028
Benson....................	1,255	....	1,255
Billings....................	737	1,323	†586
Bonhomme....................	7,449	5,468	1,981
Bowman....................	162	....	162
Bottineau....................	818	....	818
Brookings....................	8,288	4,965	3,323
Brown....................	12,241	353	11,888
Brulé....................	7,524	238	7,286
Buffalo....................	864	63	801
Buford....................	524	....	524
Burdick....................	75	....	75
Burleigh....................	5,354	3,246	2,108
Butte....................	1,081	....	1,081
Campbell....................	1,199	50	1,149
Cass....................	21,085	8,998	12,087
Cavilier....................	5,029	....	5,029
Charles Mix....................	4,022	407	3,615
Clark....................	4,892	114	4,778
Clay....................	6,201	5,001	1,200
Codington....................	5,648	2,156	3,492
Custer....................	1,292	995	297
Davison....................	5,940	1,256	4,684
Day....................	5,601	97	5,504
De Smet....................	76	....	76
Deuel....................	4,403	2,302	2,101
Dickey....................	3,897	....	3,897
Douglas....................	3,801	6	3,795
Dunn....................	32	....	32
Eddy....................	825	....	825
Edmunds....................	2,422	....	2,422
Emmons....................	1,046	38	1,008
Ewing....................	50	....	50
Fall River....................	472	....	472
Faulk....................	3,120	4	3,116
Flannery....................	64	....	64
Foster....................	992	37	955
Grand Forks....................	20,454	6,248	14,206
Grant....................	6,793	3,010	3,783
Griggs....................	2,093	....	2,093
Hamlin....................	3,757	693	3,064
Hand....................	7,057	153	6,904
Hanson....................	3,933	1,301	2,632
Harding....................	43	....	43
Hettinger....................	63	....	63
Hughes....................	5,268	268	5,000
Hutchinson....................	9,006	5,573	3,433
Hyde....................	2,175	....	2,175
Jerauld....................	3,458	....	3,458
Kidder....................	1,572	89	1'483
Kiugsbury....................	7,345	1,102	6,243
Lake....................	5,432	2,657	2,775
La Moure....................	2,072	20	2,052
Lawrence....................	10,326	13,248	†2,922
Lincoln....................	7,598	5,896	1,702
Logan....................	336	....	336
McCook....................	5,641	1,283	4,358
McHenry....................	800	....	800
McIntosh....................	390	...	390
McKenzie....................	24	....	24
McLean....................	942	....	942
McPherson....................	1,422	....	1,422
Marshall....................	2,187	....	2,187
Mercer....................	254	....	254
Miner....................	4,928	363	4,565
Minnehaha....................	13,857	8,251	5,606
Moody....................	5,189	3,915	1,242
Morton....................	5,873	200	5,673
Mountraille....................	37	13	24
Nelson....................	3,031	....	3,031
Oliver....................	327	....	327
Pembina....................	11,510	4,862	6,648
Pennington....................	3,224	2,244	980
Potter....................	2,336	....	2,336
Ramsey....................	3,271	281	2,990
Ransom....................	4,286	537	3,749
Renville....................	31	....	31
Richland....................	9,043	3,597	5,446
Roberts....................	2,154	....	2,154
Rolette....................	2,232	....	2,232
Sanborn....................	4,106	....	4,106
Sargent....................	3,234	....	3,234
Sheridan....................	40	....	40
Spink....................	10,446	477	9,969
Stanley....................	653	793	†140
Stanton....................	322	....	322
Stark....................	1,507	....	1,507
Steelo....................	3,080	....	3,080
Stevens....................	55	247	†192
Stutsman....................	5,632	1,007	4,625
Sully....................	3,233	296	2,937
Towner....................	366	...	366
Traill....................	8,119	4,123	3,996
Turner....................	8,282	5,320	2,962
Union....................	8,017	6,813	1,204
Villard....................	200	....	200
Wallace....................	46	....	46
Walsh....................	12,775	....	12,775
Walworth....................	1,412	46	1,366
Ward....................	257	....	257
Welles....................	285	....	285
Williams....................	36	15	22
Wynn....................	10	....	10
Yankton....................	9,404	8,390	1,014
NOT IN ANY COUNTY.			
A strip of land between Edmunds, McPherson, and Brown Counties....	1,055	....	1,055
A strip of land between Cavilier, Walsh, and Ramsey Counties.......	68	....	68
Sisseton and Wahpeton Reservations...........	45	....	95

* Amount given in census of 1880; but, owing to changes in county lines since that time, a population amounting to 1,785 is not included in this column, thus making the actual footing 133, 392.

† Decrease.

Of the inhabitants, 263,411 are in South Dakota and 152,199 in North Dakota.

Of the population in 1885, 707 were colored, 191 Chinese, and 647 Indians; 236,045 were males, 179,565 females, 150,990 foreign born, 58,530 born in Dakota, and 206,090 in other States and Territories; 186,691 were under twenty-one years of age, 252,910 were single, 145,046 married, 9,184 widowed, 549 divorced. There were 13,171 births and 2,511 deaths in the census year. The number of blind persons was 116; deaf and dumb, 182; idiotic, 112; insane, 225; maimed or crippled, 1,231; attending school, 63,256; unable to read, 3,920; unable to write, 4,807. By occupation there were 78,362 farmers, 45,494 mechanics and laborers, 10,418 merchants, 2,116 teachers, 2,895 railroad and 2,632 professional men. The number of acres in farms was 16,842,412; average size of farms, 205 acres; average value of farms, $1,911.40; value of market-garden products, $135,913; forest products on farms, $209,989; wages paid during year, $5,949,082; bushels of buckwheat raised, 51,466; of rye, 196,750; gallons of milk produced, 1,860,358; cheese, 116,557 pounds; eggs, 5,852,426 dozen. The following table gives the live-stock on ranches and ranges by districts:

DISTRICTS.	Horses.	Cattle.	Sheep.	Value of all.
	No.	No.	No.	
Black Hills......	9,112	152,865	63,205	$4,203,234
Bad Lands......	688	20,558		486,580
Little Missouri...	506	60,112		1,232,430
Souris...........	528	4,131	912	208,140
Upper Missouri..	250	501		34,905
Total......	11,084	238,167	64,117	$6,165,289

The yield of small grains in 1885 was largely in excess of that of the previous year, except in the case of wheat, which, owing to low prices, had a decreased acreage.

Miscellaneous.—Toward the close of the year Secretary Teller was succeeded by M. L. McCormack. The Legislature of the proposed State met at Huron, Dec. 14, and chose A. G. C. Moody and A. J. Edgerton as United States Senators.

DELAWARE. State Government.—The following were the State officers during the year: Governor, Charles C. Stockley, Democrat; Secretary of State, William F. Causey; Treasurer, John M. Houston; Auditor, Jesse L. Long; Attorney-General, George Gray, succeeded by John H. Paynter; Superintendent of Free Schools, Thomas N. Williams. Judiciary, Supreme Court: Chief-Justice, Joseph P. Comegys; Associate Justices, William G. Whitely, John W. Houston, and Edward Wooton. Chancellor, Willard Saulsbury.

Legislative Session.—The Legislature met on Jan. 6, and adjourned on April 17. About twenty acts were passed relating to the city of Wilmington, a large number of incorporation acts, and a large number relating to roads and school districts. Thirty-two divorces were granted. Among the more important acts of the session were the following:

Authorizing the Wilmington City Council to borrow $150,000 to purchase ground for a public park.

Concerning legal holidays—requiring the following day to be observed when a legal holiday falls on Sunday.

To provide for additional safeguards against injuries from explosives.

To complete and make good the title of land sold in the State to aliens prior to Jan. 1, 1885, and authorizing them to hold or sell the same as though they were naturalized citizens.

Amending the law in relation to divorce suits in the courts, by making one month's notice, by advertisement, to the defendant necessary, instead of three months as heretofore.

To amend the act for the protection of fishermen by prohibiting fishing in the waters of the State by non-residents.

Amendment to oyster law, restricting time for dredging to April, instead of May.

To regulate the practice of dentistry.

To regulate the tonging of oysters.

To amend the law excluding the judiciary from connection with corporations, by exempting religious and charitable corporations.

To amend the act in relation to sales of real estate by executors and administrators.

Amendment to act in relation to registration of births, deaths, and marriages—to make the registration more complete.

To provide for the refunding of $120,000 of the State debt falling due July 1, 1886.

To amend the act for the regulation of weights and measures, so as to authorize the inspector to test weights used for both buying and selling.

To amend the revenue laws by requiring each agent for a foreign insurance company other than fire or life to pay $50 for a license and 2½ per cent. of the gross amount of premiums received and assessments collected.

Authorizing plate-glass insurance companies having a capital of $100,000 to do business in the State.

Authorizing the issue of fractional licenses to hotels, when changing owners before the expiration of the regular license, and authorizing the owners of new hotels to procure from the resident associate judge a fractional license good until the ensuing term of court.

Requiring locomotive engineers to blow the usual signal on the whistle within 400 yards of all highway crossings.

Amending chapter 12, volume 17, regulating the time for dredging for oysters.

Authorizing sheriffs to make deeds, after the expiration of their terms of office, for properties sold by them.

Requiring the annual statements of the levy courts to be issued in December, instead of May.

To exempt the Dover glass-works from taxation for ten years.

For the protection of livery and boarding stable keepers, giving them a lien on property committed to their care until all charges are paid.

To provide for the adoption of children by application to the Orphans' Court.

To increase the salaries of the Chancellor and judiciary.

Defining the duties of the State Treasurer.

Authorizing the Pilot Commissioners to issue licenses to pilots working under the Pennsylvania laws.

To authorize the appointment by the Court of Chancery, of a trustee, to act with the husband of an insane wife in the transfer of property.

To amend chapter 62, volume 16, authorizing the confiscation of dogs or game-cocks used or kept for the purpose of fighting.

Legalizing the publication of official advertisements in Sunday newspapers.

To amend chapter 80, volume 14, so as to allow a married woman not living with or supported by her husband to have the free right in and use of her own money and property.

For the preservation of game and game fish, and regulating the times for gunning, hunting, and fishing.

Amendment to uniform ballot law, authorizing the names of parties to be placed at the head of tickets, without regard to the political complexion of a majority of the candidates on the tickets.

To provide for the better analyzation of phosphates by permitting the State chemist to draw his own samples.

For the payment of claims against the State.

Prohibiting shad-fishing between sunset, Saturday evening, and sunrise, Monday morning.

A Wilmington journal says: "The Legislature of 1885 will be memorable chiefly for what it has not done. It has not given New Castle County the increased representation which the party had pledged should be given. It has not given the people the privilege of convoking a constitutional convention. It has not passed the judiciary amendment, nor the incorporation amendment. It, or rather a small, obstructive, short-sighted minority of its members, has broken faith with the people, and inspired in them a distrust of future pledges."

Senatorship. — Attorney-General Gray was elected to the United States Senate, to fill the vacancy caused by the resignation of Senator Bayard, appointed Secretary of State in President Cleveland's Cabinet.

DENMARK, a kingdom in northern Europe. The Constitution is embodied in the charter of June 5, 1849, which was modified in 1855 and 1863, but restored in an altered form in 1866. The executive power is exercised by the King, through a ministry responsible to him and indictable by the Folkething before the Rigsret for transgressions of the Constitution, and the legislative power by the Rigsdag or Diet. The upper house is called the Landsthing, and consists of 66 members, of whom 12 are nominated for life by the Crown, from actual or former representatives in the legislature, and the remainder are elected indirectly by the people for the term of eight years. The classified electoral system on which the members of the upper house are returned, gives much the largest proportion of votes to the rural aristocracy and the capitalistic class of the towns. The popular chamber, called the Folkething, consists of 102 members, elected by direct universal male suffrage for three years. The only classes debarred from the franchise are those that have been recipients of public charity and persons in service who have no households of their own. The former class can regain the right by repaying the sums received. The limitation of age is thirty years. The Folkething decides in the first instance on all money bills presented by the Government. The Rigsdag meets annually on the first Monday in October. The Landsthing appoints every four years four of its members to form with the judges of the Supreme Court the Rigsret, which is the highest tribunal and has cognizance of legislative impeachments.

Government.—The reigning King is Christian IX, born April 8, 1818, fourth son of Duke William of Schleswig-Holstein-Sonderburg-Glücksburg. He was appointed to the succession by the Treaty of London, concluded May 8, 1852, and the Danish law of succession of 1853, and succeeded to the throne on the death of Frederick VII, Nov. 15, 1863. The heir-apparent is Frederick, born June 3, 1843.

The ministry, first organized June 11, 1875, is composed of the following members: J. B. S. Estrup, Minister of Finance and President of the Council; S. H. S. Finsen, appointed Aug. 29, 1880, Minister of the Interior; J. V. M. Nellemann, Minister of Justice and Minister for Iceland; Baron O. D. Rosenörn-Lehn, Minister of Foreign Affairs, appointed Oct. 11, 1875; Commander N. F. Ravn, Minister of the Navy, appointed Jan. 4, 1879; Colonel J. J. Bahnsen, Minister of War, appointed Sept. 13, 1884; J. F. Scavenius, Minister of Worship and Public Instruction, appointed Aug. 24, 1880.

Area and Population.—In 1880 the city of Copenhagen, covering an area of 7 square miles, contained 234,850 inhabitants; the islands of the Baltic, with an area of 4,025 square miles, 865,678 inhabitants; and the peninsula of Jutland, with an area of 9,752 square miles, 868,511 inhabitants; total area of the kingdom, 13,784 square miles; total population, 1,969,039 persons, divided into 967,360 males and 1,001,679 females. The number of marriages in 1882 was 15,496; of births, 65,070; of deaths, 39,164; natural increment, 25,906. Of the births 10 per cent. were illegitimate. Emigration is mainly to the United States. The number of emigrants was 2,972 in 1878; 3,118 in 1879; 5,667 in 1880; 7,985 in 1881; and 11,614 in 1882. The foreign-born population in 1880 included 33,152 Germans, of whom 22,007 were born in Schleswig; 24,148 Swedes, and 2,823 Norwegians. The population of the towns numbered 515,758, that of the country 1,453,280. Out of every 1,000 inhabitants, 469 were dependent on agriculture, 229 on manufacturing industries, 68 on commerce, and 27 on navigation and fishing. The law forbids aggregation of farmsteads to form large estates, but encourages the subdivision of freeholds. A tenant farmer has complete control of his land as long as his rent is paid. Of the total area of Denmark about 75 per cent. is productive, one sixth of the remainder consisting of peat-bogs. About 6 per cent. of the productive portion is forest, and the rest is almost equally divided into pasture, meadow, and arable land. The grain acreage in 1882 was 2,681,691 acres, the product 86,706,937 bushels. The number of cattle increased from 1,238,898 in 1871 to 1,470,079 in 1881. There were exported in 1881 84,586 head of cattle, and imported only 2,126. The net export of sheep numbered 55,499; of swine, 235,856. The number of horses in the country in 1881 was 347,561; of sheep, 1,548,613, the latter showing a decrease in late years; of pigs, 527,417. The export of wool in 1881 was 22,300 cwt. The national wealth was estimated in 1879 at about $500,000,000.

Education. — Denmark is a very advanced country in respect to education. Attendance in school is obligatory from the eighth to the fifteenth year of age. The state supports the University of Copenhagen, with 84 professors and 1,261 students; the Polytechnic School connected with it, with 183 students; 13 gymnasia; 27 scientific schools; and 2,940 elementary parochial schools, with 231,935 pupils. Of the conscripts of 1881, only 0·36 per cent. could not read nor write.

Commerce.—The imports in 1882 were 253,070,216 kroner in value, showing a constant increase from 190,418,869 kroner in 1878. The exports were 188,011,084 kroner in 1882, against 183,472,415 kroner in 1881, and 196,556,930 kroner in 1880. Of the imports in 1882, 38·5 per cent. came from Germany, 23·2 per cent. from Great Britain and her colonies, 12 6 per cent. from Sweden, 5·3 per cent. from the United States, and the remainder chiefly from Russia, Norway, and the Danish colonies. Of the exports, 39 per cent. were to Great Britain, 32 per cent. to Germany, 14·2 per cent. to Sweden, 6·5 per cent. to Norway, and 2 per cent. to the United States. Flour, live animals, and butter, constitute two thirds of the total exports. About half as much grain is imported as is exported. The other leading imports are woolen goods, sugar, coal, timber, minerals, and metals.

Colonies. — The aggregate population of the Danish colonial possessions, which have an extent of 87,124 square miles, is 127,186. The area of the Faroe Islands, 17 of which are inhabited, is 510 square miles; their population, 11,221 souls; the area of Iceland, 39,726 square miles, population 72,445; the area of the Danish possessions in Greenland, 46,740 square miles, population 9,757. The only colonies of commercial importance are the Danish Antilles. St. Croix has an area of 74 square miles, and 18,430 inhabitants; St. Thomas an area of 23 square miles, and 14,389 inhabitants; and St. John an area of 21 square miles, and 944 inhabitants.

Navigation.—The number of sailing-vessels in the merchant fleet in 1884 was 3,009, of 194,208 tons, a decrease of 18,993 tons since 1878; the number of steamers, 258, of 81,042 tons, an increase of 35,918 tons during the same period. The number of vessels entered at Danish ports in 1883 was 26,526, tonnage 2,973,070, of which 1,484,030 tons were under the Danish flag; the number cleared, 25,132, tonnage 2,944,082, of which 1,418,556 tons were Danish. There were besides 25,778 coasting-vessels entered, and 24,106 cleared.

Railroads and Telegraphs.—The railroad mileage at the beginning of 1884 was 1,106, of which the state owned 932 miles. The length of telegraph lines belonging to the state in 1883 was 2,283 miles; of wires, 6,316 miles.

Finance.—The budget for 1884–'85 estimated the revenue at 53,718,409 kroner (1 krone= 27 cents), and the expenditure at 46,996,552 kroner. Of the revenue, 27,217,000 kroner are derived from customs and excise duties; 9,267,900 kroner from direct taxes; 5,557,303 kroner from interest of the reserve fund, railroad surplus, etc.; 2,475,000 kroner from stamps; 2,014,000 kroner from legal fees; 1,702,869 kroner from the revenue of the sinking fund, pensions, deposits, etc.; 1,673,000 kroner from duties on inheritances and the transfer of property; 1,136,230 kroner from the surplus of the domains, and the remainder from other sources. Of the expenditures, 9,724,400 kroner are applied to the service of the national debt; 9,240,317 kroner to expenditures on the army; 5,769,694 kroner to the navy; 4,765,452 kroner to public works; 3,486,052 kroner to pensions; 3,186,903 kroner to financial administration; 2,571,463 kroner to extraordinary state expenditures; 2,572,952 kroner to the administration of justice; 2,253,746 kroner to the expenditures of the Interior department; 1,427,077 kroner to public worship and education; 1,225,760 kroner to the civil list, and the remainder to the expenses of legislation, diplomacy, and the administration of Iceland.

The public debt amounted on March 31, 1883, to 200,343,243 kroner, having been reduced from 234,740,700 kroner in 1870. On March 31, 1882, it stood at 201,664,701 kroner, divided into 187,907,034 kroner of internal and 13,757,667 kroner of foreign debt, and was offset by assets amounting to 84,306,206 kroner, consisting of a surplus of 40,728,814 kroner, a reserve fund of 19,276,262 kroner, provided against sudden emergencies, and various assets amounting to 24,301,130 kroner. The capital expended on the state railroads amounted at the same date to 130,052,923 kroner.

Army and Navy.—All able-bodied citizens are liable from the age of twenty-two to serve eight years in the regular army and reserve, and eight years more in the extra reserve. The infantry are drilled six months, the cavalry nine and a half months, and the artillery and engineers five months. A part of the recruits, those who have learned the least, are called up for a second and longer period of training. Every corps has to drill besides from thirty to forty-five days every year. The war effective in 1883 was as follows: Infantry, 29,992; cavalry, 2,180; artillery, 4,755; engineers, 1,366; total, 35,293 men, besides 1,176 officers. The extra reserve could furnish 14,000 men in addition.

The navy in the beginning of 1885 consisted of 8 ironclads and 3 armored torpedo-boats, besides 25 or more unarmored steamers, mostly small. The most modern of them were the Helgoland, with 12-inch plates and a 36-ton and four 22-ton guns, and the Tordenskjöld, a gunboat protected with iron and cork, carrying a 50-ton Krupp breech-loader of 15 inches caliber, a 6-inch Krupp and three smaller guns, also two swift torpedo-launches, besides appliances for shooting Whitehead torpedoes. Another torpedo-vessel of the same type was building in 1885; also a floating battery. The fleet is manned by 132 officers and 1,218 men.

The Political Crisis.—The long constitutional conflict between the Government supported by the Landsthing, on the one hand, and the Folkething on the other, became acute in 1885. The people grew dangerously impatient of the pertinacious resistance to the national will made by the King and his unpopular ministers. For a dozen years the electoral majority has demanded, not merely the restoration of the franchises of the Constitution of 1849 that were curtailed in 1866, but popular sovereignty and the parliamentary system as it exists in England and France, with a Cabinet responsible to the legislature. At first, under the advice of ministers chosen from the old National-Liberal party, the King made various concessions to the democracy, and the Landsthing showed a disposition to compromise; but in 1875 the reactionaries gained the ear of the King, who turned to the Conservative party, and called to the helm the so-called "Landowner Ministry," with the energetic and obstinate Estrup for its chief. The ministry took a firm stand for the strict construction of the Constitution of 1866, which makes the King a free agent in the selection of his ministers, and bestows the legislative power jointly and equally upon the two branches of the legislature. The finance law, or budget of state, must be presented first by the Government to the Folkething directly after the opening of the session, and must have three readings in each chamber. If, after it has been passed up to the Landsthing, amendments are made by that body, it comes before the Folkething again; and, in case the popular chamber does not agree to the alterations, it is sent back to the Landsthing; if the upper chamber holds fast to its amendments, then a joint committee of fifteen members of each house is appointed to work out an agreement; yet either house, by a majority vote, can reject the compromise agreed upon by the committee. In the latter case there is no constitutional authority for supplying funds to the Government. This gap in the Constitution was provided against in the Swedish Constitution of 1866, by submitting the budget in the last instance to the majority vote of both chambers in joint session. In the session of 1876–'77, the United Left, composed chiefly of the Moderate and Radical groups, refused to vote the budget in the form proposed by the Government, and the Landsthing rejected the modifications of the lower house. As no constitutional budget was agreed upon, a provisional budget was decreed by a stretch of the royal prerogative. In the following session the Radicals, under the lead of Berg, proposed the impeachment of the ministry for breach of the Constitution; but the Moderate Liberals, led by Count Holstein-Ledreborg, opposed the motion, and carried a vote approving the provisional budget. In the following sessions the alliance with the Moderates enabled the Government to carry through measures for the reorganization of the army and navy. The uncompromising attitude of the ministry in the budget question finally drove the Moderates over to the Opposition. When the Folkething refused to vote certain items of the budget, it was twice dissolved, each time returning with a stronger Opposition majority. The Landsthing then withdrew its support from the Government and agreed to a compromise budget, from which the principal part of the ministerial demands was omitted. At this stage of the conflict the ministerial party in the Landsthing were disposed to accept a Liberal ministry, if the popular party would be content with such a compromise; but the Radicals insisted on the recognition of the principles of ministerial responsibility, and the full control of the popular chamber over supplies and taxation. The Moderate Liberals, who before wished to reach an understanding, but were alienated by the irreconcilable course of the ministry, now supported the demands of the Radicals. In the session of 1882–'83, Berg, the leader of the majority in the Folkething, proclaimed the "withering" policy, the determination that legislation should lie fallow until the desired interpretation, or rather alteration, of the Constitution was accepted. In that session 42 of the 50 Government bills, all the most important ones except the budget, were tabled in the committee-rooms. The Folkething voted an address to the King, expressing regret that the attitude of the ministry caused the arrest of legislative action. The Landsthing sent a counter-address, declaring its confidence in the Cabinet, and the expectation that the King would guard its constitutional rights. King Christian replied in a tone of approval to the latter address. In his reply to the Folkething, he declared that the complaint against the ministers applied rather to its own action, since it not only neglected to co-operate in forwarding a large number of ministerial measures that had been partially enacted by the Landsthing, but had put aside even the important national defense bill, without trying to reach an agreement with the Landsthing and with the Government. In the session of 1883–'84, the obstructive policy was more sharply applied. The most important Governmental propositions, such as national defense works and reforms of the tariff and taxation, were dismissed in a resolution declaring that a ministry not possessing the confidence of the people could not be trusted with the execution of laws of such importance. The Opposition majority even went to the length of withholding the ratification of a commercial treaty concluded with Spain with great trouble, the provisions of which were eminently satisfactory to the mercantile and manufacturing interests of Denmark. With the utmost difficulty, at the price of extreme concessions on the part of the Landsthing, a regular budget for the year 1884–'85 was passed at the end of May, 1884. No other enactment of importance was passed in a session of eight months; from five to six months were taken up with the budget debate. The majority in the Folkething prolonged the debate in order to compel the Landsthing to accept its decisions, or extend the deliberations over the limit of the financial year, and thus deprive the Government of the financial means of carrying on the administration. The Landsthing replied to these tactics with a request to the Government for energetic proceedings that should impel the Folkething to pass the financial law without further procrastination, and leave the Landsthing time to discuss the items. As all the bills proposed were shelved by the Folkething without discussion, the members of both houses passed their time in idleness, while their diet allowances mounted up during a session unprecedentedly long. The triennial period of the Folkething ended with the session. The general election, which took place on June 25, 1884, wrought a change in the political situation.

Every election that has occurred during the constitutional struggle has brought more radical and democratic elements to the front. In 1881 the veteran President of the Folkething, Judge Krabbe, belonging to the Moderate Liberals, retired from the political stage, leaving the Radical leader Berg free to perform his stroke of withering the functions of government by refusing to legislate. The elections of 1884 brought to the surface the ultra-democratic and socialistic tendencies of the town population in a way to cause alarm to Berg and the Peasant party. Copenhagen, which had always returned Old or National Liberals, who voted with the Government, now elected

Democrats in two of its ten wards and Socialists in two others. The Ministerial party and the Opposition maintained the same strength as in the last Rigsdag, but in the Opposition there was a decided shifting of the equilibrium in the direction of radicalism. The Moderates lost many seats to the Radical, or International, or European Left, representing advanced ideas in religious and educational matters, and to the more extreme factions.

The triumph of the popular party in Norway stimulated the Danish party that was battling for the same principles. There was a project of popular demonstrations in front of the royal palace, such as had taken place in 1848 and 1863, to demand the dismissal of the ministers. The Government, by creating a Ministry of War under the energetic Colonel Bahnsen, and by various precautionary measures, indicated a determination to proceed to violent repression upon the slightest provocation. The idea of a popular army of volunteer corps, on the pattern of the Norwegian rifle bands, was entertained. In February, 1885, a multitude of applications were made for admission into the Copenhagen Rifle Corps, the only body having access to the military shooting-grounds near the capital. Suspicion was aroused, and, as the great majority of the body were political adherents of the Government, the applicants were refused admission. This action was the occasion of a series of indignation meetings and street demonstrations, which the authorities suppressed by rigorous means.

The Opposition in the Folkething counted 80 of the 102 members. In the beginning of the session Berg formed out of the Farmers' party a group called the National, or Danish Left, numbering 50 members, which separated from the International Left, or the sections holding advanced ideas and betraying socialistic tendencies. The extreme ideas were represented by a new organ, the "Politiken," edited by the talented brothers Dr. G. and E. Brandes, which supported Berg's Radical rival Hörup.

The Session of the Legislature.—The regular opening of the session of the Rigsdag was postponed, on account of the burning of the Christiansberg Castle, till the beginning of November, 1885. The Opposition were united in the desire to upset the Estrup ministry, but harmony no longer prevailed on questions of tactics or of principle. The Ultras were not satisfied with Berg's plan of withholding legislation. They wished to resort to more extreme measures, or at least to refuse to vote the budget. The debate over the financial law lasted in the Folkething till the end of February. In the middle of February the Government presented a provisional budget to enable it to defray the necessary expenses for April in case the budget was not passed before the end of the financial year. This provisional budget no longer took the last regular budget as a measure of the necessary expenditures, but the budget estimate of the Government, including the long-disputed items for the fortification of Copenhagen and other extraordinary expenditures. The Folkething had already struck out the seventh part of the total sum of the Government draught budget. It voted a provisional budget in the old form, but the Landsthing substituted the form now demanded by the Government. The regular budget was sent up to the Landsthing with reductions amounting to between 7,000,000 and 8,000,000 kroner. With the assent of the ministry, the Landsthing agreed to cut it down about 3,000,000 kroner, but the Folkething stood by its decision. On March 26 the joint committee of both houses met, but without any prospect of an agreement. A Moderate Liberal proposed to enable the Government to defray necessary expenses for the first two weeks of the new financial year, so that the chambers would have time to continue the discussion, but the resolution was voted down. On the evening of March 31 the Government party in the joint committee proposed to place 3,000,000 kroner at the disposal of the administration. This proposition was rejected likewise. The following day the Rigsdag was closed by royal message. For the first time a message of prorogation was sent to each house separately. In the Folkething it was read to almost empty benches, as the Opposition members had demonstratively left the hall previously. Both parties issued manifestoes, that of the Ministerialists declaring the Opposition responsible for the incalculable dangers of the existing state of affairs, and the other protesting against the oppression and violence perpetrated on the popular representation and the violation of the Constitution by the Government. In the middle of March the Folkething had voted an address to the King, praying for the dismissal of the Cabinet. "Since the Landsthing," it said, "by rejecting the provisional budget, has deprived the legislature of the chance of discussing the differences with deliberation, the prospect of an agreement is less probable than ever. The Thing can not allow it to come to a definite breach, and to an incalculable chain of ruinous conflicts, without again addressing an earnest and reverent word to the King of the land, whose high calling it is to stand above the parties, and whose noblest prerogative is to let peace and conciliation succeed bitter strife." The King was told that it depended upon his decision to retain or to dismiss the ministers, "whether we enter upon a new era of a political struggle that will become more passionate and dangerous than any yet experienced—a struggle in which the laws of the Constitution will be twisted and corrupted by sophistical interpretations, if they are not openly set aside—a struggle in which one extreme will call forth the other, and in which the energies of our little country will be consumed in a destructive fratricidal war, or whether from this moment, when the peril is greatest, a period of useful and harmonious labor for the weal of the people and the fatherland can be counted on, under the actual observance of that Constitution which your Majesty and we have sworn to recognize as the inviolable basis of the political liberties of the Danish people." The Landsthing sent a counter-address, throwing the blame on the Folkething. The King received the deputations on March 31, and again expressed his sorrow that nothing had been done to improve the military defenses of the country. He said that the ministry could not be blamed because the two Things were unable to agree on the budget, and that if he dismissed the ministers as the condition of securing a vote of supplies, that would be a surrender of his constitutional position as King. On the 1st of April a royal "law" was promulgated, countersigned by all the ministers, which decreed a provisional budget for 1885–'86, empowering the Government to collect the existing taxes and to make the necessary expenditures, not to exceed the sums set down in the budget prepared by the Government and laid before the chambers.

Popular Agitation.—On the 1st of April a demonstration in Copenhagen was promptly suppressed by the police. The movement for arming the people after the Norwegian example was checked by a ministerial decree. A royal proclamation was issued, suppressing the constitutional right to bear arms, and forbidding the sale of fire-arms except to persons having a license from the police. Many citizens refused to pay the taxes levied by royal decree, and resisted their collection by force.

Meeting of the Rigsdag.—The session of 1885 was opened Oct. 5. Berg was re-elected President of the Folkething. The members of the Left remained away on the opening day, and the Prime Minister opened the chambers instead of the King. The treasury accounts for 1884–'85 showed a total revenue of 56,977,800 kroner, exceeding the estimates by more than 3,300,000 kroner, and a total expenditure of 47,899,500 kroner, which was 3,333,000 less than the estimates, leaving a surplus of over 9,000,000 kroner. The budget for 1886–'87 reckoned the receipts at 55,500,000 kroner and the expenditures at 64,900,000 kroner. The estimated expenditures included the sum of 27,878,000 kroner for the army and navy, made up of 9,241,000 kroner of ordinary and 7,380,000 kroner of extraordinary military expenditures, and 6,574,000 kroner of ordinary and 4,683,000 kroner of extraordinary naval expenditures. The extraordinary military expenditures comprised sums for infantry weapons of a new model, for guns for the projected fortifications of Copenhagen, and for beginning the fortifications. This plan of fortification of the capital had already been laid before the Folkething eight times without success. For the extension of the means of communication the sum of 6,872,000 kroner was set down. On Oct. 12 the Folkething adopted a resolution refusing assent to the provisional financial law, which had been promulgated without constitutional authority. The Prime Minister declared that the action of one house alone had no effect, and subsequently the Government issued a declaration arguing that the ministry alone is authorized to submit a provisory law for the approval of the Rigsdag, and that it can do so at any time during the following session. On the 16th the Folkething decided not to pass the next year's budget to the second reading. Intense excitement prevailed in Copenhagen and throughout the kingdom. Serious riots and imposing demonstrations occurred in the capital. The garrison was strengthened and several political arrests were made. On the 21st an attempt was made to assassinate the Prime Minister. The perpetrator was a typesetter named Rasmussen, nineteen years of age. On the 23d of October the King prorogued the Rigsdag, on account of the political agitation, until Dec. 18. The working-classes were greatly excited. Theoretical socialism had long found able expounders in Denmark; but the Social Democratic organization among the laboring-men was a new growth.

DEPOSIT AND TRUST COMPANIES, corporations authorized by legislative enactment for the purpose of receiving upon deposit, as bailee for storage and safe-keeping, articles of value. As there is a radical distinction between deposit companies, usually styled safe-deposit companies, and trust companies as such, they must be treated as the legal status of each requires. Both derive their existence by charter from State governments. Both are also required to make semi-annual reports of their affairs and condition to the Superintendent of the Banking Department, or other duly qualified official. Also, once a year or oftener, an official examination is had, by State authority, as to the conduct of affairs, the action of the directors and trustees, the safety and prudence of management, the security afforded depositors, and whether the requirements of the charter and of law have been complied with.

Trust Companies.—These may with propriety be termed American institutions. They had their birth in this country, and are emphatically a modern institution. In some respects they are similar to banks; in others they are widely different. They receive deposits and make loans, but they do not issue currency, neither do they undertake the general collection of commercial paper. Their duty is to accept and execute all kinds of trusts. They act as registrars and agents for the transfer of stocks and bonds; they become trustees for corporations, and assume the responsibilities of executors, administrators, guardians, and receivers of money for courts in complicated litigations; they make investment, collect interest, protect property placed in custody, and perform a variety of miscellaneous financial business both for individuals, firms, and for corporations. In making loans for any enterprise, such as the building of a railroad or aiding in the completion of one already begun, or the formation of a company for any other public benefit where individual capital is not enough, their duty is to make such an examination of the securities offered that the moneys belonging to their depositors shall suffer no loss. A usual way is to pay out the money in installments; thus, in building a section of railroad, a given amount is paid or loaned to the company at intervals, according as the work has progressed. Much of the book-keeping of loan and trust companies is similar to that of banks and bankers generally. They often do a large banking business, but more generally have the accounts of a class who do not so frequently deal with banks.

Safe-Deposit Companies.—The business and general object of a safe-deposit company is to receive on deposit (simply as a bailee for safe-keeping) any personal property included under the name of diamonds, watches, paintings, statuary, books, fine clothing, silks, shawls, laces, family relics, jewels, plate, money, specie, bullion, silver-ware, gold-ware, bronzes, wills, stocks, bonds, securities, valuable papers, bank-books, etc., together with trunks, cases, or packages under seal. These are to be held by the company for a given rental, at the option of the owner or depositor. Each depositor receives a paper containing a description of the property that he puts in care of the deposit company. In turn he is himself described minutely on the books of the institution. The applicant is required to sign his name to this description, and is then given a pass-word, which belongs to his case and entry exclusively, or he may rent a box, and have absolute control of the contents, without description and without responsibility from the company, except due diligence in protection as required by law. He is furnished with a key to his drawer or box, and can have access to his property at his convenience, either in the presence of the guard or in a private apartment secure from any observation whatever.

In order to secure the extreme of protection, the vaults and offices are usually built on ground-floors or basements, with interior storage apartments massively guarded. A favorite method of rendering the sides and bottom of the vaults fire, burglar, water, and bomb proof, is to line them with courses of franklinite and chilled iron, with sections overlapping, and so fitted and riveted together that they form a complete solid of two and a half to three inches in thickness; outside of this is a course of granite from two to three feet in thickness, and this in turn is coated with concrete to a thickness of three or four feet.

The vaults are in reality huge steel chests, set in masonry and closed by massive doors, and wrought-iron and steel gratings, and are guarded by armed watchmen by night and day. As a further safeguard, each watchman is obliged to keep a half-hour tally, which is recorded on the dial of a clock in the office. He is also obliged to communicate by special wire, at regular intervals, usually half-hourly, with the telegraph-office. Any failure to do so causes the immediate sending of a special officer to inquire into either his mishap or dereliction of duty. There are electrical and other safeguards, which in the interest of their customers are kept secret by safe-deposit companies.

The locks, bolts, and bars with which the doors and gratings are secured, are doubly protected by time-locks and electric apparatus.

The rentals vary from $5 to $300 a year, according to amount of space and value of property. Another method of rental is based on a percentage of the owner's estimate of full value of his deposited property. For coupon bonds and other securities, an insurance policy is generally issued, containing a description of the bond by date, number, and value, which is also entered in full on the books of the company. Diamonds, jewelry, plate, family relics, etc., are received on deposit in sealed packages, or trunks, and are insured at estimated value. Insurance policies, leases, wills, and other valuable or private papers, are received in sealed envelopes or packages.

The boxes, drawers, and chests range from the capacity of an ordinary envelope-box upward. Each receptacle has but one key, and the keys are all dissimilar.

The following is a list, nearly or quite complete, of the deposit and trust companies in the United States that have a capital of $100,000 or more:

CALIFORNIA.

San Francisco:	
California Safe Deposit and Trust Co.	$899,980
San José:	
Safe Deposit Bank	300,000

CONNECTICUT.

Hartford:	
Connecticut Trust and Safe Deposit Co.	300,000
New Haven:	
Union Trust Co.	100,000
New London:	
Equitable Trust Co.	1,500,000
Norwich:	
Thames Loan and Trust Co.	100,000

DAKOTA.

Huron:	
American Investment Co.	500,000
Madison:	
American Mortgage and Investment Co.	100,000
Mitchell:	
American Investment Co.	500,000

ILLINOIS.

Chicago:	
Merchants' Loan and Trust Co.	2,000,000
Prairie State Loan and Trust Co.	100,000
The Union Trust Co.	125,000

IOWA.

Creston:	
Creston Loan and Trust Co.	100,000
Des Moines:	
Iowa Loan and Trust Co.	500,000
Northeastern Mortgage and Investment Co.	150,000
Emmetsburg:	
American Investment Co.	350,000
Sioux City:	
Union Loan and Trust Co.	100,000
Storm Lake:	
Farmer's Loan and Trust Co.	150,000

KANSAS.

Topeka:	
Kansas Loan and Trust Co.	100,000

KENTUCKY.

Louisville:	
Fidelity Trust and Safety Vault Co	$200,000

MAINE.

Portland:	
Portland Trust Co	100,000

MARYLAND.

Baltimore:	
Safe Deposit and Trust Co. of Baltimore	500,000

MASSACHUSETTS.

Boston:	
American Loan and Trust Co	600,000
Boston Loan Co	100,000
Boston Safe Deposit and Trust Co	600,000
Collateral Loan Co	150,000
International Trust Co	500,000
Lombard Investment Co	285,000
Massachusetts Loan and Trust Co	500,000
New England Trust Co	500,000
Worcester:	
Worcester Safe Deposit and Trust Co	200,000

MINNESOTA.

Minneapolis:	
Minneapolis Loan and Trust Co	500,000
U. S. Trust, Mortgage and Debenture Co	1,000,000
Worthington:	
Minnesota Loan and Investment Co	100,000

MISSOURI.

Kansas City:	
Missouri Union Trust Co	100,000
Sedalia:	
Missouri Trust Co	100,000

NEBRASKA.

Ashland:	
American Loan and Trust Co	250,000
Hastings:	
Nebraska Loan and Trust Co	250,000
Omaha:	
Central Investment Co	143,000

NEW JERSEY.

Camden:	
Camden Safe Deposit and Trust Co	100,000

NEW YORK.

Brooklyn:	
Brooklyn Trust Co	600,000
Long Island Loan and Trust Co	500,000
Long Island Safe Deposit Co	200,000
Buffalo:	
Buffalo Loan, Trust, and Safe Deposit Co	137,000
New York City:	
American Loan and Trust Co	500,000
Central Trust Company of New York	1,000,000
Equitable Trust Co	1,500,000
Knickerbocker Trust Co	300,000
Metropolitan Trust Co. of City of New York	1,000,000
New York Life Insurance and Trust Co	1,000,000
Real Estate Trust Co	150,000
Farmers' Loan and Trust Co	1,000.000
Mercantile Trust Co	2,000,000
Title Guarantee and Trust Co	175,900
Union Trust Co. of New York	1,000,000
United States Mortgage Co	1,000,000
United States Trust Co. of New York	2,000,000
Commercial Trust Co	1,000,000
Mutual Trust Co	2,000,000
New York Car-Trust Co	500,000
American Safe Deposit Co	200,000
Bankers' Safe Deposit Co	100,000
Lincoln Safe Deposit Co	500,000
Manhattan Safe Deposit and Storage Co	200,000
N. Y. Produce Exchange Safe Dep. and Stor. Co.	150.000
Stuyvesant Safe Deposit Co	200,000
The Mercantile Safe Deposit Co	300,000
The Safe Deposit Co. of New York	283,300
Syracuse:	
Trust and Deposit Co. of Onondaga	100,000

OHIO.

Cincinnati:	
Fidelity Safe Deposit and Trust Co	500,000
Safe Deposit Co. of Cincinnati	100,000
Chardon:	
Geauga Savings and Loan Association	100,000
Cleveland:	
Citizens' Savings and Loan Association	1,000.000
Savings and Trust Co	750,000

PENNSYLVANIA.

Philadelphia:	
Fidelity Insurance, Trust, and Safe Deposit Co.	$2,000,000
Girard Life Insurance, Annuity, and Trust Co	450,000
Guarantee Trust and Safe Deposit Co	1,000,000
Northern Sav. Fund. Safe Deposit and Trust Co.	250,000
Pa. Co. for Ins'ing Lives and Granting Annuities.	2,000,000
Penn Safe Deposit and Trust Co	175,000
Phil. Trust, Safe Deposit, and Insurance Co	1,000,000
Providential Life and Trust Co	1,000,000
Union Trust Co	500,000
Harrisburg:	
Commonwealth Guar., Trust, and Safe Dep. Co.	150,000
Pittsburg:	
Safe Deposit Co. of Pittsburg	425,000
Pottsville:	
Safe Deposit Bank	100,000
Union City:	
Farmers' Co-operative Trust Co	200,000

RHODE ISLAND.

Providence:	
Rhode Island Hospital Trust Co	800,000

SOUTH CAROLINA.

Charleston:	
South Carolina Loan and Trust Co	300,000

TENNESSEE.

Nashville:	
Mechanics' Savings and Trust Co	100,000

VERMONT.

Burlington:	
Farmers' and Mechanics' Sav. Ins. and Tr. Co.	100,000
Rutland:	
State Trust Co	100,000

DISASTERS IN 1885. The following is a partial list of the fatal disasters that occurred during the year, whether from natural or artificial causes. As a general rule, only disasters involving the loss of several lives have been noted. So, too, groups of fatal accidents have had, for a like reason, to be omitted; such, for instance, as the thirty-eight workmen killed in the new Croton Tunnel, within six months.

January 1. Beginning Dec. 30, with a violent disturbance in the provinces of Granada and Malaga, earthquakes continued at intervals through the month of January, and may properly be included in the year's record. About 2,000 lives were lost; 1,237 bodies being actually found. Passenger-train on Baltimore and Ohio Railroad derailed at night by miscreants who placed a piece of iron in the switch-frog. Nearly all the passengers more or less hurt; 2 killed.

2. Explosion of dynamite in the Underground Railway in London; several injured.

11. Explosion; tug-boat Mike Dougherty, Elizabeth, Pa.; several injured, 2 killed.

15. Shipwreck; collision off Holyhead, between British steamer Admiral Moorsum (sunk) and American ship Santa Clara; 5 lives lost.

17. Fire in Asylum for the Insane at Kankakee, Ill.; 17 lives lost. At Summit, O.; freight-train jumped the track at a switch; 2 killed.

20. Avalanches in the province of Cuneo, Italy; several villages devastated; many lives lost.

24. Explosions; dynamite in Parliament Buildings, London; several persons injured; much damage done.

25. Railway accident; collision near Brussels; 20 injured.

30. Railway accident; a bridge near Sydney, New South Wales, gave way under a passenger-train; 40 lives lost.

31. Explosion; natural gas near Pittsburg, Pa.; many persons injured.

February 8. Explosion in starch-works, Peoria, Ill.; 2 killed.

10. Explosion at Vale Colliery, Nova Scotia; 13 lives lost.

12. Fire in the Blockley Almshouse, Philadelphia; 19 lives lost.

16. Explosion ; powder-magazine at Gibraltar ; 17 killed. Shipwreck ; collision ; British steamer Holmhurst cut in two and sunk by Belgian steamer Westernland; the latter, with 800 passengers, was but slightly injured ; 4 lives lost.

17. Explosion in coal-mine near Wilkesbarre, Pa. ; 13 injured, 1 killed.

19. Fire ; warehouses in Philadelphia ; 2 killed.

20. Railway collision near Washington ; 8 injured, 5 killed.

21. Railway collision near Canajoharie, N. Y. ; 5 injured, 2 killed. Railway collision near Delhi, O. ; 15 injured. Railway collision near Toll Gate, West Va. ; 5 killed. Fire ; dwelling-houses in Philadelphia ; 5 killed. Explosion ; natural gas, at Wellsburg, West Va. ; 5 killed. Fire ; tenement-houses in New York ; 6 lives lost.

27. Explosion in School of Gunnery, Shoeburyness, England ; 17 killed.

March 3. Explosion ; Unsworth Colliery, Sunderland, England ; 36 killed. Railway accident near Pittsburg ; 3 killed. Explosion ; steamboat near Wilmington, N. C. ; 3 killed.

6. Railway collision near Grenada, Miss. ; 3 killed. Explosion ; colliery at Harwan, Austrian Silesia ; 147 killed.

9. Explosion ; powder-mills near Newburg, N. Y. ; 2 killed.

18. Explosion in mines at Camphausen, Prussia ; 150 killed.

22. Fire ; Langham Hotel, Chicago ; 4 injured, 5 killed.

27. Explosion of coal-dust at McAllister, Indian Territory ; 11 killed. Explosion in mines, Chili, South America ; 35 killed,

30. Shipwreck ; British steamer Orestes sunk by collision ; 70 lives lost.

April 3. Explosion at Martinello, France ; 18 killed.

4. Shipwreck ; Russian steamer Marinopol in Sea of Azof ; 30 lives lost.

13. Fall of buildings ; eight unfinished houses in New York ; 12 injured.

14. Fire ; piano-factory, New York ; 9 firemen injured.

19. Fire ; farm-houses near Reading, Pa. ; 4 lives lost.

22. Volcanic eruption in eastern Java ; about 100 lives lost. Fire in Vicksburg, Miss. ; 20 lives lost.

26. Snow-slide, near Eagle River, Col. ; 11 lives lost.

—. Avalanche in Iceland ; 24 lives lost (date not given).

May 3. Fire ; tenement-house in New York ; 11 lives lost.

5. Fall of building and fire ; factory in Brooklyn, N. Y. ; 10 lives lost.

8. Avalanche ; near Lake Vau, Armenia ; 68 lives lost.

13. Colliery disaster near Pottstown, Pa. ; 3 lives lost.

15. Fire ; Cleveland, O. ; 2 lives lost. Fire ; Owatonna, Minn. ; 5 lives lost.

20. Explosion ; gas at St. Louis ; 2 killed.

21. Fire ; Cincinnati, O. ; 15 lives lost (14 women, 1 man).

25. Shipwreck ; French bark Georges Jeanne run down by British steamer City of Rome ; 22 lives lost.

27. Fall of building ; tenement-house, Jersey City ; 4 killed, 29 injured.

28. Fall of buildings in Jersey City ; 10 injured, 4 killed.

31. Earthquake ; in the Vale of Cashmere ; estimated losses, 70,000 houses, 33,000 animals, 3,000 human lives.

June 3. Explosion in mine near Durham, England ; 13 lives lost. Lightning, Chicago, Ill. ; 5 killed.

6. Fire at Barrie, Ontario ; 3 killed.

8. Water-spout ; the town of Paso de Cuarenta, Mexico, destroyed ; 170 lives lost.

10. Fall of building ; staircase of court-house at Thiers, France ; about 100 injured.

11. Fall of railway-tunnel, near Chattanooga, Tenn. ; 6 lives lost. Explosion ; giant powder near Galveston, Texas ; 10 injured, 10 killed.

14. Shipwreck ; British steamer Speke Hall sinks in Gulf of Aden ; 1 survivor ; number of lives lost uncertain. French gunboat Reynard foundered at the same time ; 127 lives lost.

18. Explosion ; Pendlebury colliery, near Manchester, England ; estimated loss, 200 lives.

20. Explosion ; colliery near Apedale, North Staffordshire, England ; 10 lives lost.

23. Shipwreck ; Italian steamer Italia ; 65 lives lost.

24. Explosion ; Powder-mill, Lucca, Italy ; 12 lives lost. Floods in China ; estimated loss, 10,000 lives.

26. Explosion ; steam-boiler at Bardstown Ky. ; 3 killed.

27. Explosion ; colliery at Dudweiler, near Saarbrücken, Prussia ; 27 lives lost.

July 11. Shipwreck ; steam-yacht sunk by hurricane on Lake Minnetonka, Minn. ; 10 lives lost.

21. Shipwreck ; collision at sea ; British steamers Cheerful and Hecla ; 11 lives lost.

24. Thunder-storm at Cajetani, Italy ; 13 persons killed by lightning ; many injured.

25. Fall of buildings at Cologne, Germany ; 45 lives lost ; many injured. Earthquake near Tashkend, Asiatic Russia ; 64 injured, 54 killed. Shipwreck ; American whaler Napoleon, in Arctic Ocean ; 22 lives lost.

August 8. Tornado ; St. Lawrence County, N. Y. ; village of Norwood nearly destroyed. Fire ; hotel at Las Vegas, New Mexico ; 8 lives lost.

11. Explosion ; colliery near Wilkesbarre, Pa. ; 12 lives lost.

17. Explosion ; probably dynamite on board steamer Felton, in Delaware river, at Philadelphia ; 500 lives endangered ; 7 injured.

19. Shipwreck ; British ship Huntingdonshire, on Californian coast ; 18 lives lost. Shipwreck by a cyclone in Red Sea ; German corvette Augusta ; 238 lives lost.

25. Shipwreck ; ship-load of Mohammedan pilgrims in Gulf of Aden ; about 100 lives lost.

September 8. Shipwreck ; collision in North Sea between British steamers Drenda and Dolphin ; 17 lives lost.

10. Shipwreck ; collision at sea between British steamer Auckland and German gunboat Blitz ; 15 lives lost. Floods in the Presidency of Bengal, India ; many lives lost.

October 11. Storm off the coast of Labrador ; 80 vessels wrecked ; 43 lives lost.

13. Explosion in mine at Silver Cliff, Colorado ; 10 lives lost.

15. Earthquake at Palermo ; 8 lives lost.

18. Railway collision near Jersey City, N. J. ; 9 killed, many injured. Railway accident near West Andover, N. H. ; 3 killed.

19. Fire in Chicago ; 4 lives lost.

20. Explosion in a mine near Wilkesbarre, Pa. ; 4 lives lost.

26. Caving in of quarries in Dordogne, France ; many lives lost.

November 2. Dredging-boat in Long Island Sound ; total loss with all hands, 6 in number. Storm, wind, and rain on New England coast ; a large number of vessels wrecked.

5. Tornado near Dangerfield, Texas ; 6 lives lost.

6. Shipwreck ; New York pilot-boat No. 6 run down at sea by unknown steamer ; crew escape in boats ; 1 life lost. Tornado, Brownsville, Miss. ; no lives lost, but many persons injured and much property destroyed. Tornado in the vicinity of Selma, Ala., and passing across Dallas, Perry, and Bibb counties ;

great devastation and destruction of property; 13 killed; 50 injured.

7. Tornado, Spartansburg, S. C.; church unroofed. Tornado, S. E. Illinois; 1 person killed; several severely injured. Shipwreck; steamer Algoma on Lake Superior; 45 lives lost.

12. Railway accident; the Washington express, on the Baltimore and Ohio Railroad, jumped the track and went over an embankment near Cornellsville, Pa.; 21 persons injured.

13. Fire; Galveston, Texas; over 300 houses burned; losses exceed $1,000,000.

18. Explosion; oil-tank in Philadelphia; 6 killed.

25. Fall of a house in Jersey City; 4 children killed.

December 3. Explosion; tug-boat in East River, N. Y.; 5 lives lost—all on board.

4. Earthquake in Algeria; 32 lives lost. Explosion; natural gas at Pittsburg; many injured.

5. Railway collision on East River Bridge; 10 injured.

9. Caving of a sewer at Akron, Ohio; 4 killed.

13. Fire in London; 12 lives lost.

15. Railway collision near Austell, Ga.; 11 lives lost.

18. Mining disaster at Nanticoke, Pa.; 23 lives lost. News received of a dynamite explosion in Siberian mines; several hundred lives reported lost.

21. Explosion; Dayton, Ohio; 2 lives lost.

23. Explosion in colliery at Pont-y-Pridd, Wales; 75 lives lost.

26, 27. Fire in New York; 3 lives lost—children. Shipwreck; gales on North Atlantic coast; 8 lives lost.

29. Explosion; oil-works near Mobile, Ala.; 7 killed. Explosion; steam-boiler at Lancaster, Pa.; 3 killed.

DISCIPLES OF CHRIST. The annual meetings of the missionary organizations of the Disciples of Christ were held in Cleveland, Ohio, Oct. 20 to 23. The receipts of the Foreign Christian Missionary Society for the year had been $30,260, which, with the balance from the previous year of $4,119, gave it available funds amounting to $34,380. The disbursements amounted to $34,208. The aggregate of the receipts during the ten years since the organization of the society had been $154,086. The annual amounts showed a gradual increase from $1,706 in 1876 to the amount returned for the current year.

The society had missions in England (7 stations), Turkey (8 stations), France, Denmark, India (2 stations), and Japan. These missions severally made returns as follows: England, 7 missionaries, 1,174 members; Turkey, 9 missionaries, 219 members; France, 2 missionaries, 89 members; Denmark, 2 missionaries, 104 members; India, 5 missionaries, 3 members; Japan, 5 missionaries, 17 members; in all, 30 missionaries and 1,606 members. They also returned 323 additions during the year, and a net gain of 208 members. Two week-day schools, one for boys and one for girls, had been opened at Hurda in India, four Sunday schools had been held, and a beginning had been made in Zenana work. A school had also been opened in Japan, and another in Turkey. The project for establishing a mission in the Congo region, Africa, which the Executive Committee had had in consideration under instructions from the convention of the previous year, and for which it had appointed a missionary, had been suspended, because it had been found to require a larger outlay than the means of the society would permit.

The condition of the mission in London and the expediency of continuing it having been called in question in some of the journals of the Church, the convention by resolution approved the policy of sustaining it, and declared great satisfaction with the results that had accrued from its work.

The receipts of the General Christian Missionary Society, which has its fields of operations in the States and Territories of the United States, had been $25,176, classified as follows: for missionary funds, $15,946; for extension fund, $1,461; for special extension fund (church in Boston), $3,871; for relief fund, $173; for tract fund, $55; for other missionary boards, $148; from extension fund loans repaid, $500; balance from the previous year, $3,021. The expenditures had been about $24,036. The 32 missionaries employed by the board had visited and assisted 253 churches; had visited 83 new places; had organized 21 churches; and returned 1,420 accessions, of which 592 were by baptism. The labors of these missionaries had been performed in various States and Territories. A general evangelist had been employed among the colored people, who had labored at Knoxville, Memphis, Nashville, Lynchburg, and Strawberry Plains, in Tennessee; Wyandotte and Topeka, in Kansas; and Kansas City, Mo., and returned 127 additions to the churches. The colored people had contracted for a school-house in New Castle, Ky., where they proposed to organize a school that should have in view the instruction of young men. A similar enterprise had been begun at Sedalia, in Missouri. The financial agent of the Southern Christian Institute reported that $10,000 in stock, obligations payable on the death of the donors to the amount of $10,000, and a farm valued at $4,500, had been secured for the institution. A farm of 800 acres had been bought at Edwards, Miss., where a school for the colored race had been organized, with an enrollment of more than 300 pupils during the year. A school-room had been built and furnished. The field of operations of this society is in those districts which are outside of States that have State organizations sufficiently strong to look after their own missionary work. The organizations of this character, the aggregate of whose operations is much larger than that of the General Board, co-operate with it, and its reports generally contain summaries of their work. The aggregate of their receipts for the year was returned at $62,992. Besides this amount, the missionaries employed by the State societies reported that about $90,000 had been raised among their charges for local work. Adding together the general receipts of the State Boards, of the General Board, and of the Woman's Board, the total amount of the general offerings of the Disciples for missions within the United States was shown to be $89,924. Making allowance for special gifts not reported, it was believed it would be not less than $100,000. The State Boards had employed 160 missionaries, and these had visited and assisted 1,099 places, of which 204 were new places; had organized 68 churches; and returned 6,641 accessions, of which 3,818 were by baptism.

The receipts of the Christian Woman's Board of Missions for the year had been $16,620, of which $10,583 were credited to the general fund, and the rest to "special," "church extension," "memorial," and "endowment" funds; besides which a balance of $4,085 was returned from the previous year. The expenditures had been $20,456. The endowment fund amounted to $8,187. The society sustained missionary work at Helena and Deer Lodge, and Anaconda, Mont.; Corvallis, Or.; Burnett, Neb.; and in Jamaica and India. In Jamaica it was erecting missionary buildings and returned eight schools. The work in India was still in the beginning.

DRUGS, NEW. Alveloz.—During the latter part of 1884, U. S. Consul H. L. Atherton, of Pernambuco, Brazil, forwarded to the Department of State information obtained from Dr. R. Bandeiro, of Pernambuco, respecting an alleged cure for cancer. Dr. Bandeiro said that very little is known about the plant excepting that it belongs to the *Euphorbiaceæ*, and was described first by Müller in "Flora brasiliensis," 1875, with the name *Euphorbia heterodoxa*. It grows spontaneously in the whole north of Brazil, where it is known by different names; most commonly as alveloz, arveloz, or aveloz. The natives of Brejo (Fra Madre Deos) apply to wounds the juice flowing from a piece of broken or cut stem, after washing the injury with decoction of tobacco-leaf. The fresh juice is preferred, as it soon coagulates and acquires a bad odor. Salicylic acid, however, preserves it, and, when so preserved, it seems to give satisfactory results. Barao de Santa Cruz, a chemist, by treating the juice with water and then with absolute alcohol, obtained a resin that seemed to contain the active principle. This resin has a powerfully irritating action, and has been employed with vaseline in the proportion of one or three parts per hundred. Dr. Bandeiro says the action of the drug appears to be escharotic, and mentions cases of cancroid and epithelioma of the face cured by its use. A sample of the drug, or its preparations, having been furnished, the Department of State placed it in the hands of the Surgeon-General of the U. S. Marine-Hospital Service, who afterward reported the results of its trial on a number of cases. One of lupus of the face, which had resisted treatment for many years, recovered in a few days. Dr. Bandeiro says that its use in ulcerated sarcoma or carcinoma has not given the results that many physicians had hoped for.

Anisic Acid, occurring in prismatic, colorless crystals, soluble in alcohol and ether, is obtained by oxidation of oil of anise, and is reported to have medicinal and antiseptic properties similar to those of salicylic acid.

Antipyrine ($= C_{20}H_{18}N_4O_2 =$ *dimethyloxyquinizine*) is a derivative of coal-tar, or of a hypothetical base called *quinizine*. It was discovered by Ludwig Knorr, of the University of Erlangen, and was first experimented with to determine its physiological action by Donne, of Berne. W. Filehne first made use of it therapeutically ("Zeitschrift f. klin. Med.," vol. vii). It is used in the form of hydrochlorate, a grayish-white, crystalline powder, which turns yellowish-gray on prolonged exposure to air. Soluble in three parts of cold water, one-half part of warm water, and one-half part of alcohol. Faint tarry odor; slightly bitter taste; sometimes adulterated with kairine. Iodized iodide of potassium and nitrous acid give a reddish and greenish discoloration, respectively, with an aqueous solution of one in ten thousand. Urine, acidulated with sulphuric acid, gives a reddish-brown tint with iodized iodide of potassium when antipyrine is present. Alkalies liberate it from solution. Perchloride of iron gives a reddish discoloration. Potassium chlorate causes a yellowish deposit. Antipyrine does not alter the blood, and it appears in the urine after about thirty-six hours. It is used in doses about twice the size of those of sulphate of quinine, and may be given by the mouth, by the bowel or hypodermically, causing little or no disturbance by the latter mode. Its effects continue about twelve hours, and are most decided and rapid when it is injected under the skin. It sometimes causes vomiting, chills, and excessive perspiration, but these are said to be most liable to follow the use of a poor article. It also causes, occasionally, an eruption on the skin resembling that produced by sulphate of quinine. Altogether it seems to be a safe remedy for the reduction of fever, if used with discretion and care. It does not appear to abort or in other ways influence the course of a disease. It may be given best by the mouth in a sirup of tolu, raspberries, or lemon, or in simple elixir, compound elixir of taraxacum, or in wine, but in the latter case should be mixed just before it is given, to avoid precipitation of the coloring-matter of the wine. It has been used to the amount of one hundred and ninety grains in twenty-four hours, and its employment in typhoid fever, pneumonia, rheumatism, etc., creates a demand in Europe equal to about a fifth of that for sulphate of quinine.

Bichloride of Mercury and Urea is proposed by Dr. Joseph Schütz as a remedy for syphilis, and has the advantage of cheapness and of not causing pain or other local disturbance when employed in solution hypodermically. The solution is said to keep for at least a week.

Boldine, an alkaloid obtained from *Peumus boldus*, a South American tree, is recommended by Dujardin-Beaumetz, of Paris, as an agent for producing sleep.

Borate of Quinine, an amber-colored, crystalline powder, of a not unpleasant odor, bitter, and soluble in an equal quantity of water. It is said to be equally valuable, as a remedy, with sulphate or hydrochlorate of quinine, and to possess the advantage of being less bitter and of causing less ringing in the ears.

Cannabinon, derived from *Cannabis indica*, is a soft extract when cold, but when heated becomes a viscid, brown balsam, transparent in thin layers; of a strongly aromatic odor, and sharp, bitter taste. It is insoluble in water, easily soluble in alcohol, ether, petroleum ether, chloroform, benzol, bisulphide of carbon, ethereal and fixed oils. The solutions are golden-yellow when dilute, brown when concentrated. Its true chemical nature is unknown. It acts as a sedative, and produces sleep in doses of 1 to 1½ grain without disagreeable after-effects. For convenience of dispensing, a 10 per cent. trituration is made, which is a dry, brown powder.

Cathartic Acid, the active principle of senna-leaves, has been separated by Ralph Stockman, of Edinburgh. Its salts have the following characteristics: Cathartate of lead is a non-crystalline, grayish powder. The neutral salt is readily soluble in water, the basic salt is insoluble, or nearly so, and on treatment with water the former splits into an acid and basic salt. Cathartate of barium behaves in the same way. When in mass, the latter is nearly black, but when finely powdered becomes yellowish red. (Details of Stockman's experiments are contained in the "Pharmaceutical Journal" of March 14, 1885.) Experiments have proved the acid to be the active element of the drug.

Choline (otherwise known as bili-neurine or sinkaline, or *trimethyloxyethenehydrinammonium hydroxide*) has been found by L. Brieger ("Ber. d. deutsch. chem. Gesel.") to belong to the poisonous substances called *ptomaines*, produced in the human body during the early stages of decomposition, which in their effects resemble *muscarine*, the alkaloid of poisonous mushrooms.

Cola-nuts (or kola-nuts), fruit of the tree *Sterculia acuminata*, Sch. and Endl., obtained from western Africa (where the negroes use the seeds or kernels as a nerve-stimulant), are coming into use as a substitute for guarana, the quality of which has become unreliable. The kernels have been found to contain 2·35 per cent. of caffeine and 0·02 per cent. of theobromine. They are, when stripped of their envelope, of about the size of a chestnut, and taste similar to the coffee-bean. When fresh they are much more bitter than when dry, and are correspondingly more active.

Colchicin.—A. Hondès having announced in 1884 the discovery of a crystallizable colchicin in colchicum, and the results obtained being so much at variance with previous observations by others, C. J. Bender undertook a review of his processes, and finds Hondès's *crystalline* colchicin mythical. The colchicin is an amorphous powder, melts at 145° C., is neutral, and can not combine with acids.

Condurango, a drug that was some years since introduced from Ecuador, through the efforts of the Department of State, as a cure for cancer, but soon fell into disuse owing to the numerous failures reported, has, of late, been growing in favor in Europe.

Cornutine, a new principle discovered in ergot by a German, Dr. Kobert, is believed by him to be the agent that acts most powerfully upon the involuntary muscle-fiber of the uterus.

Euonymin is the name heretofore applied to a resinoid substance obtained from *Euonymus atropurpureus*, used as a laxative and as a stimulator of the function of the liver. Hans Meier and Romm, of Dorpat, have recently given it to a crystallizable glucoside obtained from the plant. This substance is an intense heart-poison, and experiments are being made to determine its fitness as a substitute for digitalin.

Euphorbia pilulifera, or pill-bearing spurge, indigenous to Queensland and the tropical portions of Asia, Africa, and South America, has lately attracted attention as a remedy for asthma. It contains a gum-resin, soluble in water or dilute alcohol. A half-ounce of the dry weed, steeped in two quarts of water, is reduced by simmering to one quart, and one to four wineglassfuls are to be taken after the evening meal.

Guachamaca.—Recent studies of this drug, derived from *Malonetia nitida*, Spruce, growing in Venezuela, indicate it as the possible source of the arrow-poison, *curare*, the nature of which has long been unknown. Its effect in causing paralysis of the muscles without affecting sensibility is quite similar, and *guachamacine* (or *malonetine*) resembles *curarine* in being completely insoluble in alcohol, in which respects it differs from all other curare alkaloids.

Hydriodate of Hyoscine ($C_{17}H_{21}NO_3H_{1\frac{1}{2}}$ aq.), prepared from amorphous hyoscyamine, is in the form of yellowish crystals, easily soluble in alcohol, less so in water; is a recent addition to agents that dilate the pupil of the eye (mydriatics). Its cost, $7.50 a gramme (15 grains), will interfere with its popularity.

Lactate of Quinine is recommended as the best salt of quinine for hypodermic use, on account of its solubility and neutral character.

Parabuxinidine, a newly discovered alkaloid in the leaves of the box (*Buxus sempervirens*), consists of microscopic, colorless, transparent crystals, insoluble in water but very soluble in alcohol. It is bitter, melts at a low temperature, burns completely, with smoke, on platinum, and is strongly acid, with litmus, in dilute solution.

Paraldehyde is a clear, colorless, neutral, or faintly acid liquid, of an ethereal odor, and a burning and afterward cool taste; sp. gr. 0·992–0·998. It becomes crystalline at a low temperature, melts at 10·5° C., and boils at 123°–125° C. Soluble with six times its weight of water at 13° C., and with alcohol or ether in all proportions. Its aqueous solution becomes cloudy when heated, and the drug itself should be kept from light in glass-stoppered, full bottles. As an agent for producing sleep, paraldehyde seems to be somewhat inferior to chloral hydrate, and its use, in some instances, causes more or less disturbance of the stomach, even when a dose of a half drachm is diluted with a half glass of water.

Parthenine, obtained from *Parthenium hysterophorus*, an herb growing in Jamaica, has been used by Tovar as a remedy for facial neuralgia. The "bitter broom" (*Escoba amarga*) of Cuba is said by Dr. A. L. Esporon, of Havana, to yield the same alkaloid. Its use is most suitable for neuralgias of malarial origin, but in Jamaica the drug is also employed in skin diseases; one-tenth grain of the alkaloid is a usual dose, given hourly at first and afterward less often and in smaller quantity.

Pereirine.—The hydrochlorate is lately recommended by Fereira as a substitute for quinine in obstinate cases of malarial fever, in doses of thirty grains daily, increased to sixty grains if necessary. It is derived from the *Pao Pareiro* (*Geissospermum læve*, Baillon; natural order *Apocynaceæ*), native of Brazil, where the bark has been used since 1830, when it was recommended by Prof. Silva as a febrifuge and antiperiodic. Other names by which the bark is known are *Pignaciba* and *Canudo amargoso.* Santos, who first extracted the active principle in 1838, called it *pereirine*, but more recently *geissospermine* was proposed by Bochefontaine and De Freitas, and Dr. O. Hesse, who has still later examined the drug, announces the existence of at least two alkaloids, one of which, very soluble in ether and most nearly resembling the alkaloid first obtained, he calls *pereirine*, and the other, which is with difficulty soluble in ether, *geissospermine.* The first is a white, amorphous powder, and is most abundant; the other forms small, white, prismatic crystals, which are readily soluble in acids and alcohol, but nearly insoluble in water or ether.

Picramine, derived from the bark of *Cascara amarga*, growing in the West Indies, and the preparations of the bark whence it is derived, have been recently introduced as remedies in chronic skin diseases and syphilis.

Quinoline, an artificial alkaloid derived from coal-tar, which has been proposed as an antipyretic, is now hardly thought of for that purpose, but is used, instead, as the basis for the manufacture of kairine and antipyrine (which see). Runge discovered it in 1834, and called it "leucol" (white oil); the German name for it is *Chinolin.* Gerhardt obtained it in 1842 by distilling cinchonine with caustic potash, and in 1880 Skraup and Koenig discovered the simple process for preparing it on a large scale by mixing 24 parts of nitro-benzol, 38 parts of aniline, and 120 parts of glycerin in a flask of a capacity for 2,000 parts, and provided with an upright condenser; 100 parts of sulphuric acid are added, and the whole shaken until the aniline sulphate is dissolved. It is heated on a sand-bath until reaction begins, when it is withdrawn until the reaction slackens. This is repeated until but little unaltered nitro-benzol is present. Water is then added, and unchanged nitro-benzol is driven over by heat. Render the residue alkaline, and drive over the mixture of quinoline and aniline by steam or extract them by ether. Separate these two as much as possible by fractional distillation, and remove the last traces of aniline by treating the base, in sulphuric-acid solution, with bichromate of potassium. When oxidation is completed, render again alkaline, and drive the quinoline over by steam. The yield of pure quinoline amounts to from 70 to 75 per cent. of the mixture of aniline and nitro-benzol. Quinoline is a colorless liquid, boiling at 238° C.; sp. gr. 1·094 at 20° C. It forms crystalline salts with acids.

Strophanthin, derived from *Strophanthus hispidus* (*S. kombi*, Oliver). The crude drug comes from Guinea and Senegambia, where the negroes prepare from it an arrow-poison called *kombé*, or *inée*, and is a woody climber, flowering in October or November. The follicles, ten to twelve inches long, contain 150 to 200 seeds, weighing each about half a grain, and bear a plume-like tuft at the extremity of a delicate stalk. The active principle (*strophanthin*) is crystalline, intensely active, and allied to digitalin. It is recommended by Prof. Fraser, of England, as an active diuretic in hypodermic doses of $\frac{1}{120}$ to $\frac{1}{80}$ of a grain.

Styrone, cinnamic alcohol, is obtained by treating styracin with concentrated solution of potash. It is said to be a more powerful antiseptic than either phenol (carbolic acid) or thymol, one to five hundred of urine showing no trace of decomposition at the end of three and a half months.

Syzygium jambolanum, the seeds (or fruit) of a myrtaceous plant native to East Indies and cultivated in the Antilles, is a newly proposed remedy for favoring the elimination of sugar in diabetes. The active principle is supposed to exist in the integument.

Tannate of Punicine has been proposed as a substitute for the name *tannate of pelletierine.* Punicine is a crystallizable alkaloid obtained from the root-bark of the pomegranate, and has been recommended as an efficient remedy for tape-worm, although reports of its failure have been published recently.

Thalline (*tetrahydroparachinanisol*) is a coal-tar derivative, and is used in the form of a tartrate and a sulphate. Its salts are all soluble in water, have an acid reaction, and yield green salts when mixed with solution of ferric chloride and oxidizing substances. Dr. v. Jaksch reported in October, 1884, his trials in Vienna with this new substance, which was found to possess antipyretic properties inferior to those of kairine and quinoline (which see). It is, however, free from secondary effects following its use. It may be used in doses of four to eight grains, in wafers, or dissolved in water or wine. It costs at present about $1.50 an ounce. The urine of persons taking it has a greenish tint in thin, and a brownish-yellow color in dense, layers.

Trypsin continues to attract attention as a solvent for diphtheritic membrane. It is one of the natural ferments of the gastric fluid, and should be capable of dissolving its own weight of fibrin in five to ten minutes at the temperature of the body. It is applied in the form of a spray of the following solution, as often as the condition of the patient will permit: 1¾ ounce of a 1-to-1,000 solution of salicylic acid is to be added to 77 grains of extract of pancreas, and the mixture digested in a water-bath at 98·5° Fahr. for four hours; then filtered and rendered slightly alkaline with bicarbonate of sodium.

Tulipine, derived from all parts of the fully developed garden tulip, acts, according to Ringer and Gerard, as a powerful stimulant to the secretion of saliva. It seems probably related to colchicin or scillitin, but no practical use has as yet been discovered for it. Unlike most other alkaloids, it appears to have no action whatever on the pupil of the eye.

Urethane ($C_3H_7NO_2 = NH_2CO.C_2H_5$ = carbamate of ethyl) is obtained by passing cyanic acid into alcohol, or by heating nitrate of urea with absolute alcohol, or by acting with ammonia upon ethyl carbonate. It occurs in colorless, prismatic crystals or scales, of a faint aromatic odor, and cooling, faintly aromatic taste. It is easily soluble in alcohol, water, ether, or chloroform. Its aqueous solution is neutral. It melts at 50° C., and boils at 180° C. Heated with ammonia in a sealed tube, it is converted into urea and alcohol. It is also eliminated from the body as urea. Dr. v. Jaksch, of Vienna, has found in twenty cases that it acts promptly as a producer of sleep, and is followed by no bad effects. It is easily taken, and causes no disturbance, so far as observed. Its present cost (over three dollars an ounce) will probably be greatly diminished if it is in demand.

E

ECUADOR, an independent state in South America, having an area of 206,200 square miles. The population is estimated at 1,500,000, including 600,000 aborigines. The new territorial division of the republic is as follows:

MILITARY DISTRICT OF QUITO.

Provinces.	Subdivided into cantons.
Carchi	Tulcán.
Imbabura	Ibarra, Otavalo, Cotacachi.
Pichincha	Quito, Cayembe, Mejia.
Leon	Latacunga, Pujilí.
Tungurahua	Ambato, Pelileo, Pillaro.
Chimborazo	Riobamba, Guano, Colta, Alausi, Sangay.
Oriente	Napo, Canelos.

MILITARY DISTRICT OF CUENCA.

Cañar	Cañar, Azoguez.
Azuay	Cuenca, Guaraceo. Pante, Giron, Gualaquiza.
Loja	Loja, Saraguro, Paltas, Celica, Calvas.

MILITARY DISTRICT OF GUAYAQUIL.

Oro	Machala, Santa Rosa, Zaruma.
Guayas	Guayaquil, Yaguachi, Dante, Santa Elena.
Los Rios	Babahoyo, Baba, Vinces, Puebloviejo.
Bolivar	Guaranda, Chimbo, San Miguel.
Manabí	Portoviejo, Monte Cristi, Zipijapa, Santa Ana, Rocafuerte, Sucre.
Esmeraldas	Esmeraldas.
Galápagos	A group of eleven islands.

RECAPITULATION.

DISTRICTS	Provinces.	Cantons.	Parochial districts.
Quito	7	19	195
Cuenca	3	12	86
Guayaquil	7	21	105
Total	17	52	386

Government.—The President is Don José Maria Plácido Caamaño, who entered upon the duties of his office on May 16. The Vice-President is Gen. A. Guerrero. The Cabinet was composed as follows: Interior, Foreign Affairs, Public Instruction, and Charity, Señor J. Modesto Espinosa; Finance and Public Works, Señor V. L. Salazar; War and Navy, Gen. J. M. Sarasti.

The Minister of Ecuador at Washington is Don Antonio Flores. The Consul-General of Ecuador at New York is Señor Francisco Spier. The American Consul-General at Quito, Owen McGarr.

Army and Navy.—The strength of the regular army is 5,000 men, and the navy consists of two steamers.

Finances.—In ordinary times the income of the state is about $4,000,000, and the outlay $3,360,000. The revolutionary General Elvy Alfaro having continued harassing the Government during a considerable portion of the year, the country has not been properly pacified, and its economic condition is unsettled and critical in the extreme; hence the Government has been straitened in its finances. In order to raise $48,000 in May, it had to pay 9 per cent. interest, and the customs receipts at Guayaquil had to be pledged as security.

Prior to the late political troubles the internal debt of the country amounted to $3,200,000, and the foreign indebtedness to $1,824,000—a loan contracted in England in 1855.

Revision of the Tariff.—Congress continued its sessions from June 10 to August 16, and, prior to adjournment, passed the bill raising the import and export duties. In accordance with this measure, going into operation from November 1, the former 8½ per cent. set aside out of the import duties toward the building of roads, and 6 per cent. toward the redemption of old silver coin in circulation, were replaced by an extra duty of 20 per cent. on imports. There were placed on the free list: coal, green fruits, guano, bricks, Indian corn, potatoes, saltpeter, gold and silver coin, and sugar-house machinery. The following goods were made to pay 20 cents a kilogramme and the above-named 20 per cent.: matches, candles, lumber and timber, and cotton goods; 12 cents a kilogramme, and 20 per cent.: linseed-oil, olive-oil, olives, beer, paints, wine, glass, and vinegar; 5 cents a kilogramme, and 20 per cent.: empty bags, sugar, cement, wheat, oakum, macaroni, flour, petroleum, 150° and above, and lard; 2 cents a kilogramme, and 20 per cent.: rice, bran, tea, anchovies, lime, barley, fire-wood, cordage, beans, and peas. Fire-arms, dynamite, petroleum below 150°, powder, salt, and copper and nickel coin were prohibited.

The new export duties per quintal of 46 kilogrammes were on cocoa, 30 cents; coffee, 20 cents; India-rubber, 30 cents; hides, 23 cents; cudbear, 23 cents; ivory-nuts, 10 cents; sarsaparilla, 23 cents.

Lighthouse Dues.—Congress at the same time fixed lighthouse dues, to be defrayed by every sailing-vessel entering a port of the republic, at 10 cents a ton for every light in the harbor; steamers only to pay 5 cents.

Suspension of the Bank of Quito.—The Banco de Quito, a bank of issue and deposit, in which many from among the common people had their savings, failed during the summer, the shareholders losing all they had invested, and the creditors and holders of bank-notes only receiving 60 per cent. Fortunately, an arrangement was made through Government action with the Banco Internacional of Guayaquil, by virtue of which the deposits on cash liabilities, as well as acceptances having sixty days to run, were finally paid in full, the Banco Internacional taking charge of the liquidation, and the Government paying 15 per cent. on the face of the outstanding bank-notes, so that the loss on the latter was reduced from 40 per cent. to 25.

Postal Service.—The official returns received from the postmasters of six provinces show for 1884 the following items of mail matter received and forwarded: Province of Carchi, 20,922 letters, postal-cards, and periodicals; Imbabura, 29,713; Pichincha, 380,976; Leon, 16,014; Tungurahua, 39,580; Chimborazo, 29,790: together, 516,995 items.

Education.—The province of Carchi has 17 schools, with 1,562 pupils and 26 teachers; expenditure during the school year 1883-'84, $4,056. The province of Imbabura has 33 schools, with 2,136 pupils, 36 teachers, and an annual expenditure of $6,293. The province of Pichincha has 86 schools; expenditure, $40,564; the number of pupils being 9,172, and of teachers, 178. The province of Leon has 30 schools, with 2,184 pupils and 33 teachers; annual expenditure, $5,984. The province of Tungurahua has 54 schools, with 4,145 pupils and 71 teachers; expenditure, $9,507. The province of Chimborazo has 31 schools, with 3,749 pupils and 73 teachers; expenditure, $9,040. The province of Quito has 271 schools, with 22,585 pupils and 419 teachers; expenditure, $76,636. The seven provinces named, taken together, have 522 schools, attended by 45,533 pupils, taught by 836 teachers, at a total annual expenditure of $152,080.

Commerce.—The total imports from Ecuador into England, France, and the United States, during 1883 for the first two, and 1884 for the last, amounted to $1,268,000, $44,000, and $1,374,000 respectively, while the exports for the same countries amounted to $882,000, $924,000, and $629,000 respectively, making the whole trade for England $2,140,000, for France $968,000, for the United States $2,003,000. If the amount of American goods entered into Ecuador by way of the Isthmus, and credited in our returns to Colombia, were taken into consideration, it would show that our trade with the republic is greater than that of either England or France.

Railroads.—In addition to the 74 miles of railway in operation between Yahuachi and the Chimbo river, the following lines are projected and the concessions granted: one from Ibarra to the coast of Esmeraldas, which Mr. Finlay has undertaken to build; one from Quito to Guayaquil, which the Peruvian contractors, Messrs. F. Arancibia and Viñas, will construct; and the completion of the Yahuachi line, which Mr. J. Kelly has in charge. In July the Government made a contract to that effect with the latter to build a railroad from Chimbo to Sibambe, across the Cordillera, 51 miles, to be finished in four years, the Government subsidizing the contractor at the rate of $29,000 a kilometre, and for twenty-two years the line is to be the exclusive property of Mr. Kelly; but the mails and government freights and employés are to be carried free during that time. In 1907 the line is to become Government property, to be delivered in good working condition complete.

Telegraphs.—In August the telegraph wire reached the city of Cuenca in the south, thence to extend to Loja, the southernmost point of the republic. Toward the north it will soon be carried as far as Ibarra, so that at no distant date Ecuador will be in telegraphic communication by land with Colombia. By cable Ecuador is in communication with the rest of the world by means of the Central and South American Telegraph Company's lines. In September work was begun on the telegraph line that is to connect Guayaquil with Daule; also on the one between Yahuachi and Babahoyo, between Guaranda and Riobamba, and finally between Quito and Tulcan.

Productions.—Guayaquil is famous for its hats and hammocks, made of the pita fiber. (See "Annual Cyclopædia" for 1883, page 638.) The well-known Panama hats are all made at Guayaquil, but get their name from the fact that Panama merchants formerly controlled the trade. They are braided under water by native women, of strands often twelve to fifteen feet long, and fine ones are very expensive. A woman often takes two to three weeks to braid a single hat, which sells for five or six dollars. A hat is shown at Guayaquil worth $250; it is made of a single straw or fiber, as fine as thread and as soft as silk, and the woman that made it was engaged four months in the work.

Sugar-planting is being undertaken more and more extensively in the republic; but so far the amount produced does not suffice to cover the requirements of domestic consumption, although from 40,000 quintals in 1884 it increased to 70,000 in 1885.

A great impulse was given in 1885 to gold-mining at the mines of Zaruma, at Zingata in the Nabon gold-mining district, and rich placers have been discovered between Chordeley and Gualaceo, as well as at Gualaquiza.

Cocoa is the most important product and export article of Ecuador. The total receipts in 1885 at Guayaquil up to Aug. 31 amounted to 155,298 quintals of 100 pounds Spanish, equal to 101½ pounds English, against 144,878 in 1884. The whole crop in 1884 was 173,000 quintals.

National Exhibition.—The seventy-sixth anniversary of the independence of Ecuador is to be celebrated in 1886 by an exhibition to be held at Quito, opening on Aug. 10. The show is to embrace agricultural products, manufactures, and the fine arts. Prizes will be distributed in the shape of gold, silver, and copper medals, and diplomas.

Eruption of Cotopaxi.—Before daybreak, on July 23, the volcano of Cotopaxi began an eruption of the severest kind. Torrents of lava mixed with ashes and rocks overflowed a portion of the city of Chimbo, at the foot of the volcano, destroying a hundred houses. At one o'clock in the morning a rumbling noise was heard, accompanied by peals of thunder sounding like heavy artillery, heard as far away as Guayaquil, 130 miles, where the earth trembled and windows and doors were shaken. The rising sun was obscured at Quito, and a thin powder-like dust rained on the city. Before the darkening, the spectacle of the volcano projecting flames and fiery stones to an immense height was magnificent. The darkness lasted at Quito till eight o'clock in the morning.

Treatment of Rebels.—The brutality shown toward prisoners by the Ecuadorian Government early in the year it was feared would lead to horrible reprisals. Col. Infante, who was captured at Palenque, was shot a few hours afterward. Other executions took place, recalling the worst days of Flores and Garcia Moreno. One at Manabi was of a most cold-blooded nature. A Chilian officer, named Sepúlveda, had been serving with Gen. Eloy Alfaro; in one of the combats in the department he was severely wounded and taken prisoner. A mock trial was held, and a few hours afterward he was taken out and shot. A strong protest respecting these political assassinations was published at Guayaquil in January, signed by over 2,000 of the best-known citizens.

The Santos Case.—This case attracted considerable attention, not only on its own merits, but on account of its bearings on the treaty stipulation as regards American citizenship and its forfeiture through longer residence of the adopted citizen in the country of his birth than the stipulations of the treaty allow. Julio Romano Santos was imprisoned in Ecuador in November, 1884, for conspiring with others to overthrow the Government. He was born in that country, and after being naturalized in the United States he returned there to engage in business, staying in his native country five years. He denied the charges made by the authorities of Ecuador. Article III of the treaty with Ecuador, made in 1872, declares: "A residence of more than two years in the native country of a naturalized citizen shall be construed as an intention on his part to stay there without returning to that where he was naturalized. This presumption, however, may be rebutted by evidence to the contrary." Santos having passed the prescribed limit, it became necessary, before the Secretary of State, Mr. Bayard, could interfere in his behalf, to show that he intended to return to the United States. After a careful investigation, giving Santos the benefit of some doubt, Mr. Bayard became satisfied on this point, and demanded the release. The American Government had moved in the matter as early as the month of February, the man-of-war Wachusett dropping anchor in the harbor of Guayaquil on the 9th, and thence proceeding to Manta, a port of Ecuador, two miles from the town of Montecristo, where several brothers of Santos were at the time, and where the commander of the vessel procured information. Toward the close of July the American steamer Iroquois arrived at Guayaquil, and three days after her arrival Santos was liberated by virtue of a decree of general amnesty which the Ecuadorian Government issued—perhaps in order to save its dignity after having hesitated about releasing Santos so long, not feeling fully convinced, it appears, that it was clearly wrong. This terminated the case, so far as the Washington authorities had taken an active interest in it. Santos returned to the United States.

EDWARDS, HENRI MILNE, a French zoölogist, born in Bruges, Belgium, Oct. 23, 1800; died in Paris, July 29, 1885. His family were of English origin, and had come from Jamaica to Bruges, whence they removed to Paris in 1814. He studied medicine under the direction of his brother, William Edwards, author of a work on the influence of physical agents upon life, and afterward a member of the Institute, and took his degree in medicine at Paris in 1823. Receiving as a present a copy of Buffon's "History of Animals," when ten or eleven years old, he read it through, and undertook to make a scientific analysis of it. This, with his brother's influence, seems to have turned his tastes in the direction which they permanently took. He began the series of his contributions to knowledge in the year of his graduation, when he presented several memoirs to the Academy of Sciences, one of which, "On the Influence of the Nervous System upon Digestion," which he prepared in conjunction with Breschet, attracted general attention. In 1825 he published, in association with Vavaseur, a "Manual of Materia Medica." This work, besides going through several French editions, was translated into English, German, and Dutch. In 1826 he began, with Victor Audouin, a series of researches on the anatomy, physiology, and zoölogy of the marine animals of the French coasts, in the prosecution of which the two collaborators, with their families, took up their residence at different points, and made careful explorations, during four years, of the littoral and islands. Among the fruits of this investigation were a memoir on the circulation of the blood in crustaceans, which, in 1828, gained the Academy's prize in physiology, and a work, in two volumes, on "The Littoral of France." In 1832 he was appointed Professor of Natural History in the Collége Henri IV, and Professor of Public Hygiene and Natural History in the Central School of Arts and Manufactures. In 1834 he visited Algeria, exploring its coasts in the study of marine zoölogy, and on his return presented to the Academy several memoirs, embodying the results of his observations, which were afterward included in his "Recherches anatomiques, physiologiques, et zoologiques sur les Polypes" (1838). In 1838 he was admitted to the Academy of Sciences, taking the place that had been left vacant by Cuvier. In 1841 he succeeded Audouin in the chair of Entomology in the Museum, to leave it in 1861 for that of Mammalogy. In 1844 he visited Sicily with MM. de Quatrefages and E. Blanchard, where he made the first effort in those submarine explorations and investigations of life in the depths of the sea which have since been so fruitful in results, and with the institution and prosecution of which his name is inseparably associated. The results of this mission were published in three volumes. On his return from it, he was appointed a professor in the Faculty of Sciences in Paris, in place of M. E. Geoffroy Saint-Hilaire, in a position to which he had already been inducted as a substitute in 1838. Five years later he was made Dean of the Sorbonne, and occupied the office during the rest of his life.

HENRI MILNE EDWARDS.

M. Edwards wrote much. When he was nominated to the Academy in 1838, the "notice" accompanying his presentation contained summaries of seventy original memoirs, without including his articles in the "Dictionnaire classique d'Histoire Naturelle" and Dr. Todd's "Encyclopédie d'Anatomie et de Physiologie," or his additions to Lamarck's "Histoire des Animaux sans Vertèbres," or his "Éléments de Zoologie," or the elementary works he had prepared. His publications since then have been very frequent, and they touch upon all branches of zoölogy. Some of his works have been named in connection with the events with which their publication was associated. Others are the "Manual of Surgical Anatomy," which was published in 1827, and was translated into Dutch and English; "Elements of Zoology," 1834, included by Beudant in the "Elementary Course of Natural History"; a general work on the Crustaceans, in three large volumes, and an Atlas, 1836; works on the Ascidians, 1839, and the Acalephs, Spermatophores, Cephalopods, and Eolidians, 1841; on the Structure and Classification of Recent and Fossil Polyps, 1848–'49; on British Fossil Corals, 1851–'52; on the Morphology and Classification of Crustaceans, 1851; on the General Tendencies of Nature, 1851; on the Fossil Polyps of the Palæozoic Formations, 1851; on the Natural History of Corals proper, 1857 to

1860; and "Lessons on the Comparative Anatomy and Physiology of Man and Animals," in 14 volumes, 1857 to 1880. He was a member of all the principal scientific societies in the world; the Royal Society gave him the Copley medal in 1856, and the Scientific Society of the Netherlands made to him its first award of the grand Boerhaave medal in 1880. He offered his services as a physician freely to the city of Paris in the cholera epidemic of 1852; and during the Franco-German War of 1870 he organized a company of engineers out of the employés of the scientific establishments, and worked diligently, while the city was exposed to bombardment and fire, to save their collections.

EGYPT, a principality of northern Africa, tributary to Turkey. Mehemet Ali, the governor, rebelled against the Porte in 1811 and assumed the powers of government. In 1841 he was recognized under the guarantee of the five great powers of Europe as Vali or Viceroy, and the sovereign authority was made hereditary under the Turkish law of succession. In 1863 Ismail obtained a firman creating him Viceroy, and subsequently, in consideration of his increasing his annual contributions by $1,720,000, the Sultan conferred upon him by an imperial firman (1866) the Persian-Arabic title of Khĭdív-el-Misr, or King of Egypt, commonly pronounced *Khêdive*, following the French pronunciation. By another firman he obtained the right of making treaties and increasing the standing army, and the right of succession was changed from the eldest male heir, as prescribed by the Koranic law, to the eldest son. Halim, his uncle, was driven from the country, and his immense estates were confiscated. He fled to Constantinople, where he has never ceased to urge his claims as the lawful heir to the throne. Ismail developed an insatiable thirst for wasteful expenditure. In 1878 the financial condition of Egypt had become so perilous that a commission of inquiry was formed conjointly by England, France, Austria, and Italy. In their report it was charged that Ismail had been the cause of the deplorable situation in Egypt, and that he ought in consequence to be held responsible, and to this end they caused him to cede to the state—(1) all the property of the Dairas Sanieh and Kassa, and (2) all the property held in the name of the khedivial family. In fact, it was discovered that Ismail had appropriated to himself 505,000 acres of land, and had distributed among the princes of his family 423,729 acres. The principle of *l'état c'est moi* was inherent in Ismail. Embarrassed by the rigid inquisitions of the representatives of the powers, Ismail resolved, as Mr. Vivien, the English consul-general, has said in his dispatches, "to finish by one of those dramatic incidents which one may see only in history and in Oriental life." He arrested his finance minister and foster-brother, Ismail Pasha the *Mouffetish*, a man of immense wealth, who, brought to a mock trial, was condemned to exile, but in reality was either poisoned or thrown into the Nile. Ismail confiscated to his own use his great wealth, but it was insufficient to tide him over the crisis—it only deferred it. On the 26th of June, 1879, he was deposed, and his son Tewfik ascended the throne.

The Government was now really administered under the supervision of two controllers-general, appointed one by the French and the other by the British Government, who were given the right to investigate all the departments of the public service, and an advisory voice at the councils of the Cabinet. By a decree of the Khedive, issued April 5, 1880, an International Commission of Liquidation was appointed to elaborate a financial law to regulate the relations of Egypt with her creditors. The scheme consolidating the foreign debts, fixing the interest at 4 per cent., and reserving certain revenues to meet it, was sanctioned by the Khedive in 1881. That same year a political movement was set on foot to deprive the controllers of the extraordinary powers they had assumed over legislation and administration, and to place the powers of government in native hands. From the *émeute* in the streets of Cairo in 1879, however, down to the massacre of the 11th of June, and the bombardment and burning of Alexandria on the 11th of July, 1882, there was little if anything to appeal to the sympathies of Europe in the movement inaugurated exclusively by the military. Prior to the year 1882 the wrongs of the *fellah* had been remedied. For the first time in his life he was emancipated, and he owed his disenthrallment to the *condominium* of England and France, which had secured him (1) the suppression of onerous and vexatious taxes, and the tax-gatherer placed under inspection; (2) the adoption of a fixed and equitable term of military service, to replace the perpetual service to which he had been condemned, and from which he could purchase exemption only by an excessive *backsheesh.* Oppressed by taxes, he was before the *condominium* a mere chattel attached to the glebe, or a soldier in the ranks until death. The National party in Egypt was a phantasy—it had no real existence. The insurrection of Arabi was composed of a little band of plebeian *fellah* beys who were playing the Mameluke. They aimed at the creation of a military power; and in this they were aided by the religious institution of El-Azhar, which contributed money and breathed into the patient *fellah* the spirit of religious fanaticism which later at Alexandria and Tantah was to burst out in a flame of blood. Mr. Gladstone truly said about that time: "It is a state of military violence aggravated by cruel and wanton crime; and within the circuit of associations such as these freedom can not grow," adding that it had been charitably believed in England that the military party was the popular party, struggling for the liberties of Egypt.

"There is not," said he, "the smallest ray or shred of evidence to support that contention."

The unaccountable failure of the naval forces of England and France to punish the massacre of the 11th of June—for these two powers were the custodians *de jure* of the peace of Egypt under the treaty—led to the bombardment on the 11th July of Alexandria, a necessity that grew out of the refusal to act one month before. The French Government declining to act in concert with England, gave rise to a feeling of hostility between these two powers, which may not be allayed until England shall name some definite period when she will withdraw from Egypt, and that country be committed to a *condominium* in which all the great powers shall be represented. The insurrection was virtually suppressed in September, 1882, after the *fiasco* of the rebel army at Tel-el-Kebir. The Egyptian army was disbanded, and Sir Evelyn Wood charged with its reorganization, in which, with a gendarmerie, English officers were incorporated. The subsequent defeat of this new force in the operations having Suakin for their base, leaves Egypt dependent for any offensive operations upon the English army of occupation. Sherif Pasha's ministry, unwilling to carry out the plan proposed by Lord Dufferin to abandon the Soudan, resigned, and was succeeded by Nubar Pasha, of whom Gen. Gordon, in his book, "Colonel Gordon in Central Africa," has written, "Nubar has never been to Egypt more than a comparatively low-born Armenian, who was clever enough to dispute with the consuls-general, and who, when Minister of Foreign Affairs and in the Privy Council, was fully aware of all the loans, etc., of the *Mouffetish*." Nubar is a German subject, but has always been a ready instrument to further British interests. It is significant, therefore, that he is still Minister of Foreign Affairs under British rule in Egypt.

Area and Population.—Egypt proper is contained within the limits of the narrow valley beginning at the cataracts of Assouan in 24° 5′ 23″ N., where it has a width of about five kilometres, spreading as the Nile descends to an average of twenty-five to thirty kilometres, and then widening into the large plain through which the Nile flows in two branches and pours into the Mediterranean in latitude 31·5°. The Nile, in its sinuous course from Assouan, covers a distance of 1,415 kilometres. The length of the delta, from the point where it bifurcates to the sea, is 175 kilometres in a straight line, and from Aboukir to the Peluse it has a width of 250 kilometres. It has an area of 29,400 square kilometres, being nearly the exact size of Belgium (29,455 kilometres). The Government has divided Egypt into Lower and Upper Egypt, and these in turn are subdivided into moudiriehs or provinces, which are placed under the control of governors and sub-governors, called *Moudirs* and *Nazirs*. The amount of land in the moudiriehs of these two great divisions of the country, exclusive of sandy wastes and uninhabitable parts, is 5,977,433 *feddans;* to which may be added lands growing date-trees, surface of Nile from Wady Halfai to the sea, surface of canals, railways, dikes and roads, towns, fortifications, marshes, sandy hills, lakes, etc., 7,782,773 *feddans.* A *feddan* is nearly equivalent to an acre. *Kharadji* and *ouchouri* are terms denoting fiscal divisions of land. According to the budget of 1884, the average tax per feddan on ouchouri was 51½ piasters, while the tax upon kharadji was 128¼ piasters. The agricultural population forms 61 per cent. of the total, the foreign 1·34 per cent. Taken by nationalities, the number of foreigners in Egypt, according to last census, was Greeks, 37,301; Italians, 18,665; French, 15,716; Austrians, 8,022; English, 6,118; Germans, 948; other foreigners, 4,116—total, 90,886; native, 6,469,716; nomad, 245,779—total, 6,715,495. A comparison of the official census of the year 1846 with that of 1882 shows an annual increase in the population of about 1·25 per cent. The population of the principal cities and towns in 1883 was—Cairo, 368,108; Alexandria, 208,755; Damietta, 34,046; Tantah, 33,725; Mansourah, 26,784; Zagazig, 19,046; Rosetta, 16,671; Port Said, 16,560; Suez, 10,913.

Government.—The administration of Lower and Upper Egypt has been divided into 14 moudiriehs. Lower Egypt comprises the moudiriehs of Kaloubieh, with *chef-lieu* at Benha; Charkieh, at Zagazig; Dakalieh, at Mansourah; Menoufieh, at Chehin; Gharbieh, at Tantah; Beherrah, at Damanhour; Giseh, at Giseh. In Upper Egypt, Benisouef, with *chef-lieu* at Benisouef; Fayoum, at Medinet-el-Fayoum; Minieh, at Minieh; Siout, at Siout; Girgeh, at Sonhag; Keneh, at Keneh; Esneh, at Esneh. The cities of Cairo, Alexandria, Suez, Ismaïlia, Port Said, Rosetta, and Damietta, have each a governor and a prefect of police.

Since 1882 a body of gendarmery has been formed for the provinces, and a special corps of police for Alexandria and Cairo.

On the 1st of January a new organization of police came into force, and was placed under the direct control of a director-general attached to the Ministry of the Interior. In February, 1884, new criminal codes were adopted, which were intended to supersede the magisterial power, until then invested in the moudirs. The moudirs, under the present system, are now authorized to investigate all complaints and submit the result to the council of judges of the native courts. The *cadi*, who is clothed with a religious character as well, acts in conjunction with the mudir, and as a sort of justice of the peace of the commune. As formerly, the *Sheik-ul-Islam*, residing in Cairo, is umpire in all religious matters. An attempt has been made to constitute native courts after the manner of the mixed tribunals or courts of reform, which were instituted by the powers to replace in a measure consular courts, in 1875. The experiment has not proved entirely satisfactory, as may be inferred from a recent dispatch received by Lord Granville, which says: "It is almost hopeless to expect that venality will cease among Egyptian officials until a public spirit has grown up, at all events among the upper classes, which condemns the proffer or the receipt of a bribe as a dishonorable act.* The curse of *backshish* is everywhere, and the lower courts are not yet free from corruption." The report significantly adds, "The abolition of the *kourbash* has for the time being greatly enhanced the difficulty of governing Egypt, and the New Code of Criminal Procedure is not well adapted to the country."

On the 19th of January, 1884, the Khedive issued a decree by which he prolonged the powers of the mixed courts for a period of five years.

Army and Navy.—According to the plan of Baker Pasha, who was charged with the reorganization of the Egyptian army, the military establishment was to number 10,900 men of all arms, including two regiments of gendarmes of 700 men each. In accordance with the recommendations of Earl Northbrook, the budget for 1885 provides for a reduction of the army to 4,000 men, with 18 English officers, and an increase of the police force by 3,000 men. The navy consisted of thirteen steamers, which were but poorly armored, including the viceroyal yacht.

Since the rebellion of Arabi, in 1882, an English army of occupation has remained in Egypt. On the 30th of September, 1884, exclusive of special expeditionary force, there were 10,887 men of all arms. In the mobilization of troops that took place during the year, whether they were going to or from the Soudan or returning to England, the number can not be accurately stated.

The Chamber of Notables.—This is composed of a president, vice-president, and 46 notables, representing districts as follows: Cairo, 4; Alexandria, 3; Damietta, 1; Rosetta, 1; Suez and Port Said, 1; El-Arich and Ismailia, 1; Gharbieh, 4 (with 1 for Tantah); Menoufieh, 3; Dakalieh, 3 (with 1 for Mansourah); Charkieh, 3; Beherea, 3; Ghiseh, 2; Gallionbieh, 3 (1 for Siout); Ghirzeh, 2; Esneh, 2; Keneh, 2. The powers of the General Assembly thus constituted consist in voting direct contributions, real and personal. The Assembly shall be consulted upon the construction or abolition of any canal or railway crossing certain moudirìehs. Upon the classification of lands and taxes thereon, and tax upon camels, the Government is held to inform the Assembly whenever it shall not adopt its opinion, discussion thereon being interdicted. The General Assembly is competent to give its opinion upon all questions of economy, administration, and finance having to do with the administration of the country. The notables are elected for a period of six years. Every member must be thirty years or over, and know how to read and write. No one can be elected to the Chamber of Notables if, in the moudirieh or province that he wishes to represent, he has not paid the sum of £20 as taxes every year for at least five years before his election, or if he has not been inscribed upon the electoral lists during the same period.

The General Assembly shall be convoked by the Khedive at least once every two years, and the Khedive may prorogue or dissolve it at his pleasure. In case of dissolution new elections shall take place during the six months succeeding. Every notable should at the first reunion of the Assembly, and before entering upon the discharge of his functions, take an oath of fidelity to the Khedive and to the laws of his country.

In August, Mohammed Tewfik Pasha Khedive convoked the General Assembly, and upon opening the convention addressed them as follows: "I salute you, and express to you the great pleasure I feel in seeing you here assembled. The convocation of the General Assembly for the first time has been made for the following reasons: The military rebellion has placed upon the treasury exceptional burdens, such as indemnities and others; it has occasioned in the country a check to commercial transactions, and has produced a want of confidence, which has resulted in great losses. Events in the Soudan also have created great expenses. For these reasons, and to give extension to a system of irrigation, it has been necessary to meet the financial situation. To this end the great powers, after communication with our Government, are in accord upon the necessity of contracting under their guarantee a loan of £9,000,000. His Imperial Majesty the Sultan has authorized the emission of the loan upon the subject of which the Minister of Finances will communicate with you in order that you may acquire the necessary information."

On Sept. 13 the Chamber of Notables appointed a committee to draw up a report upon Col. Scott Moncrieff's scheme for improving the irrigation of the country. The Chamber met on the 12th, to consider the report. As soon as it had assembled, Nubar appeared, and by order of the Khedive dissolved it. It was understood that this measure was necessary, as serious trouble was anticipated in the Chamber.

Payment of the Indemnities.—This was begun on the 17th of August at Alexandria. The awards of the commission have been delayed for a long period, and the delay has created much suffering. The cost of the burning of the city of Alexandria was roughly assessed at four millions sterling. The city had been consumed if it had not been for the prompt action of the acting United States consul, seconded by the American admiral, who placed at his disposition a force of marines and sailors, to whose efforts it is due that the city was not wholly destroyed.

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* On the 20th of October, 1885, the president of the Native Court was dismissed, having been detected in receiving a bribe.

Commerce.—The staple articles of import from the United Kingdom into Egypt consist of cotton goods, of the value, in 1883, of £1,861,601; coal, of the value of £507,679; machines, £121,412; and iron, £130,436.

The export of raw cotton to Great Britain in 1883 was 1,523,975 cwt., valued at £5,976674. Next to cotton, the largest article of export from Egypt to the United Kingdom, in the year 1883, was grain and flour of the value of £1,577,970. The value of cotton-seed exported, £1,696,534; beans, £902,623; wheat, £545,070; sugar, £394,318; ivory, £129,260; skins, £124,407; rice, £121,357; gum, £120,640; maize, £41,961; ostrich-feathers, £70,014.

The value of cotton goods imported in 1884 was £1,885,380; coal, £915,023; clothing, £1,212,780; indigo, £334,889; timber, £274,759; wine and spirits, £259,728; coffee, £217,907; tobacco, £173,768; refined sugar, £170,454; machinery, £142,065; wheat, £51,142.

The relative percentage of trade with various countries is as follows: England, 60; France and Algeria, 10·8; Turkey, 8·8; Austria and Hungary, 7·5; Italy, 5·2; Russia, 2·7; India and China, 2·1; America, 1·6; Greece, 0·5; other countries, 1·8.

The imports of the last year were valued at £8,596,976, and the exports at £12,309,885.

Railroads and Telegraphs.—On Jan. 1, 1884, Egypt had a railway system of a total single line of 1,276 miles. The projection of the Soudan Railway along the Nile is under advisement, but will not be undertaken for the present, unless as a part of the military operations that may be resumed against the Mahdi. The proposed railway from Suakin to Berber, which was in process of construction, has been abandoned. It was from the beginning wholly an English enterprise, and has proved to be a very costly undertaking. The Egyptian Post-Office transmitted 5,841,000 letters inland and 3,746,000 foreign letters in 1883. At the close of the year 1884 the telegraph lines consisted of 7,841 kilometres; of wires, 12,040, of which 8,097 were in Egypt and 3,943 in the Soudan.

The Suez Canal.—The canal is ninety-nine miles long, having its terminals on the Red Sea at Suez, and on the Mediterranean at Port Said. The state of the capital account in 1883 was as follows:

396,845 shares of 500 francs or £20 each	£7,936,900
297,885 obligations of 500 francs or £20 each, issued at £12, bearing interest at 5 per cent. on par, and redeemable at par	5,957,700
76,007 delegations, 500 francs, bearing interest at 5 per cent	1,520,140
96,719 thirty-year bonds, 125 francs, at 8 francs interest per annum	483,595
23,841 bonds of 500 francs, 3 per cent	462,607
399,518 coupon bonds of £3 8s. each, bearing interest at 5 per cent., for consolidation of unpaid coupons on shares redeemable at par, commenced November, 1882	1,858,361

In 1883 the founders' share of surplus profits was £143,454. Of the 396,845 shares, 176,602 shares belonged formerly to the Khedive Ismail, and were purchased from him by the British Government, in November, 1875, for the sum of £3,976,582. But the Khedive, by a convention passed in 1869, between himself and the Suez Canal Company, for the settlement of disputed claims and accounts, had alienated all dividends on his 176,602 shares up to 1894, and placed them at the disposal of the company. Against these dividends the company issued 120,000 *delegations*, which are entitled to all sums accruing on the above 176,602 shares up to 1894. The dividends that the *delegations* receive are, however, lessened by an annual sum to provide a sinking fund to extinguish them all by the end of the year 1894.

The number and gross tonnage of vessels that have passed through the Suez Canal for the year are as follow: Number of vessels, 3,307; tonnage, 8,106,601; receipt, £2,645,506. The net profits were £1,434,540. The total dividend (after placing 5 per cent. to sinking fund) paid was 17·33 per cent.

The following table shows the number and gross tonnage of vessels of the leading nationalities that passed the canal during 1883:

NATIONALITY.	No.	Tonnage.	NATIONALITY	No.	Tonnage.
Great Britain.	2,537	6,136,847	Spain.......	51	148,156
France	272	782,133	Russia	18	44,294
Holland	124	309,583	Norway	18	32,552
Germany	123	213,666	Belgium ...	12	23,450
Italy	63	195,101	Egypt......	3	4,736
Austria	67	136,586	Turkey... .	9	9,722

The Suez Canal Commission.—In the counter-proposition presented by the French ministry on the 8th of January, 1885, a proposal was made to establish a definite *régime*, destined to guarantee forever to all nations the free use of the Suez Canal. The minister said, "The Cabinet at London will not refuse its acquiescence to a proposition in which the principle has been recognized with so much clearness and loyalty in the dispatches of Lord Granville of the 3d of January, 1883, and of the 16th June, 1884." Nevertheless, England hesitated to acquiesce; and after several meetings without result, the commission that met in Paris decided, on the 11th May, to suspend work until after the ministerial crisis in England, and will not convene, perhaps, until after the elections.

M. Freycinet, replying to a member in the French Senate, said that the question of the evacuation of Egypt had been reserved, and that of the Suez Canal deferred; that the obstacles presented to the latter was the *modus* of the surveillance to be employed.

The Soudan.—The Egyptian Government designates under the generic name of Soudan all that country situated south of the second cataract. The word Soudan means black (*Bilad-el-Soudan*), the country of the blacks. Prior to the advent of the Mahdi, the Soudan, extending south to the equator, marked the southern limits of Egypt. The wonderful King M'Tsé had signed an instrument of writing presented him by an American officer in the service of Egypt, constituting himself a vassal of Egypt, and the Minister for Foreign Affairs of Ismail Pasha in 1875 hastened to communicate Egypt's pretensions in a circular addressed to the powers. It was in 1821, at a moment when Mehemet Ali had founded the dynasty of the Khedives over the slaughtered Mamelukes, that he sent his son Ismail, and subsequently the Defterdar, to subdue the Soudan (including Darfour, Sennaar, and Kordofan). He founded Khartoum, now a city of 30,000 inhabitants, situated on the left bank of the Bahr-el-Azrak (Blue Nile), about two miles from the point (Ras Khartoum) which marks the junction of the Blue Nile with the Bahr-el-Abiad (White Nile). As the natural entrepot of the commerce of Sennaar, Kordofan, Darfour, Fazogli, and Yaka, Khartoum has realized in commercial importance the hopes of the distinguished pasha. The Central African provinces annexed these late years, although undeveloped, have materially added to its commerce. The trade is roughly estimated as netting one hundred millions of francs. The fabrics and general merchandise that find their way to the Soudan are mostly English. Lord Dufferin, in 1883, proposed that the country should be evacuated, and that the authority of the Mahdi should be recognized, claiming that Egypt was unable to bear the expense. He drew the political and physical boundary of Egypt as far north as Assouan. Sir Samuel Baker, a distinguished fellow-countryman, vigorously protested. He said: "The unwarranted interference, by which an enormous area of Ottoman Empire was sought to be wrested from its legitimate ruler and thrown into the direst anarchy, was an act which awakened Egypt to the hypocrisies of British declarations." This is strong language, but Sir Samuel was indignant at the flagrant violation of the rights of the Sultan of Turkey. The firman of investiture, delivered to Tewfik the 19th Chaban, 1296 (Aug. 17, 1879), contains this pertinent clause: "The Khedive shall not, under any pretext or motive, abandon to others, in whole or in part, the privileges accorded to Egypt, which are emanations of the rights and natural prerogatives of my Imperial Government, nor shall he abandon any part of the territory."

Lord Dufferin's proposition to construct a railway from Suakin to Berber, in view of the proposed abandonment of the Soudan to the Mahdi, was incomprehensible to those who could not understand the real intentions of his government with regard to the Soudan. Once eliminated from Egypt, England could easily establish an *entente* with the Mahdi, or, failing, smash him. Some such idea was in the mind of the optimists in England, as evinced in this fatal proposition of Lord Dufferin. Applicants for the concessions appeared before Cherif Pasha, then President of the Council. They were told by a gentleman familiar with the whole country, and whom Cherif had asked to act as counselor, that every interest of Egypt, economical and political, forbade its construction. The road, two hundred and eighty-eight miles in length, ran through a sandy and rocky desert, with insufficient water, and the land absolutely irreclaimable. An army of five thousand men would be required to protect it against the Amhra, Bishareen, and other tribes, whose animosity would be invited, to say nothing of the incursions of the natural enemies of Egypt along the frontier. In the valley of the Nile the unfinished road projected by Fowler presents none of these obstacles; its completion is an absolute necessity for the development of Upper Egypt, Nubia, and the Soudan, and the irrigation and reclamation of the land along the Nile. Direct communication with the Soudan, secure from interruption by an enemy beyond the borders of Egypt, is thus obtained. Khartoum, three or four days distant by rail, will be then, in fact, an Egyptian city, and a great emporium of trade. Permit the road to be built from the Red Sea, and the trade of the Soudan will be diverted from Egypt, and Suakin will become an English port. Nubar succeeded to Cherif as Minister, and, possessing none of his predecessor's patriotic motives, he gave ready assent to the Suakin proposition. Osman Digna has, however, by his military prowess rendered a positive service to Egypt by putting a stop to the construction of the road from Suakin. Had the same energy and material been early applied to the Nile road, it had been completed in time to have rendered timely aid to Khartoum.

The eastern Soudan is a level region, surrounded by a rim of mountain-chains. The provinces of Sennaar, Fasogle, and Taka, bordering on the Abyssinian plateau, are exceedingly fertile, being copiously watered and enriched by annual alluvial deposits, like the Delta of the Nile. They produce abundant crops of cotton, sesame, pulse, dourah, wheat, and other grains. Their jungles and forests harbor the elephant, the rhinoceros, the lion, the leopard, the giraffe, zebra, and buffalo. The provinces of Khartoum, Kordofan, and Darfour have many of the characteristics of a desert climate. Except in the districts of Bara and Abou Haras, in Kordofan and other depressed oases or mountain-regions, the vegetation is scanty and the earth clothed with green only during the brief rainy season. The climate of the Soudan is divided into *shittah* and *saif* (winter and summer), which is better interpreted as a rainy and a dry season, varying in length according to latitude. At the Nile sources, where the Lakes Victoria, Albert, and Ibrahim act as water-sheds, it rains almost constantly.

Khartoum is a great entrepot for the products of the eastern and western provinces from Darfour, Kordofan, Sennaar, and Abyssinia. A local slave-trade existed, but the principal lines of the traffic had their centers in the districts of the Bahr Ghazal and Bahr Zaraf, and farther south, and ran eastward and westward to the two oceans. Ivory, gums, and ostrich-feathers were the principal articles of trade, and the commerce in 1874, when Gordon first went to the Soudan, was chiefly in the hands of the *Dongolowee*, the nomadic people of Dongola; and Mohammed Achmed, since become the Mahdi, and Zebehr Pasha were indirectly interested with their countrymen in that trade. The confiscation of the property of these Dongola merchants sowed the seeds of the discontent that culminated in the insurrection.

Sir Henry Drummond Wolff's Mission.—Sir Henry D. Wolff was accredited as envoy extraordinary and minister plenipotentiary to the Sultan some time in July. He arrived in Constantinople on the 29th August of this year, and was received the next day by the Sultan. The reported object of Sir Henry Drummond Wolff's visit was to establish an *entente* with the Sultan in Egyptian matters. Considerable opposition was made in England to his appointment on the ground that he was a *persona grata* at Constantinople and at Cairo, Sir Henry having declared that Tewfik Khedive was nothing else than an accomplice in the massacre of Alexandria—a charge which had been made by Sir William Gregory, Mr. Blunt, and Mr. Broadley, counsel for Arabi.

As late as October 11, advices from Constantinople stated that the basis of an agreement arrived at was a reform of the entire civil, military, and financial government of Egypt; autonomy; exclusion of Turkish troops; withdrawal of British troops when safe. Turkish commissioners and Sir Henry Drummond Wolff are discussing schemes of government.

The English Occupation.—This was a long chapter of blunders and mishaps, a comedy of errors alternated by dark and bloody tragedies, from Arabi to the Mahdi. The bombardment of Alexandria had been prevented, if a month earlier, on the 11th of June, England had promptly used the naval forces at her command to suppress the pitiless massacre of her subjects on that day. The burning of the city, and the massacres that followed, had been averted, if Admiral Seymour had used ordinary care. The defeat of Hicks, of Graham, and of Baker was the consequence of England's vaulting ambition to possess the Soudan, while Gordon's mission was, in fact, but the corollary of Lord Dufferin's proposition to abandon the Soudan, so far as Egypt was concerned, and then, in connection with the railway to be built from Suakin to Berber, to establish an *entente* with the Mahdi, or, as Gordan attempted to do, buy him off with money and recognize him as the Emir of Kordofan, Gordon himself, it being understood, to be, as he announced in proclamation, the Vali or Sultan of the Soudan. One and all of these have failed, and the cost in treasure and precious lives is a source of great humiliation to England. With three years of so-called reform in Egypt, England has not succeeded, either in military or civil administration, nor in politics. The army has been defeated, the finances are in disorder, and bankruptcy has been averted only by recourse to the powers; commerce is stagnant, crime is rampant. The administrators, from which the Arabic element has been eliminated to give place to English bureaucracy, are paralyzed. The prestige of the Khedive is *nil.* The Soudan, that magnificent conquest of Mehemet Ali, is lost. Scientific exploration in that country is indefinitely checked, and the march of civilization impeded. Arabi could scarcely have done worse.

The financial situation at the close of 1884 was desperate in the extreme. Lord Northbrook, with a view to remedy the evil, had been sent to Egypt and *de visu* render a report to the British Government. The memorandum of the 29th of November, submitted to the powers for their approval, contained the following considerations:

1. The necessity imposed by the state of the Egyptian budget to lighten the debt by causing the creditors to submit to a reduction of interest.

2. The necessity of meeting in some regular way the immediate charges imposed upon the country, upon the one part, by the floating debt, works on irrigation, etc.; and upon the other part by the indemnities awarded by the Alexandria Commission. To this end England proposed, first, the emission of a loan of £5,000,000, the product to be applied to the payment of the first group; and, second, a new emission of bonds of the privileged debt, to be applied to the payment of the indemnified of Alexandria. On the 19th of January, 1885, counter-propositions were submitted by M. Jules Ferry, President of the Council and Minister of Foreign Affairs for France, and addressed to Lord Granville. Briefly stated, they were as follow: Instead of a loan of £5,000,000 at 3½ per cent., to be guaranteed by England, covering the floating debt, and the creation of £4,500,000 of preferred stock at 4½ per cent. to meet the Alexandria indemnities, there should be a pre-preference loan of £9,000,000 at 3½ per cent., guaranteed by all the powers. The Domain and Daira revenues, which the English plan proposed to assign as security for the £5,000,000 loan, are to remain separately administered, largely by French officials, and applied to their special objects as at present. The reduction of interest on the debt all around is not considered admissible by the powers, but they assent in principle to the levy of a tax of 5 per cent. on the coupons of every class of Egyptian security, should it be necessary.

A *commission d'enquête* is suggested in order to ascertain the actual necessities of the Egyptian treasury. There is an admission of the principle of the right to tax foreigners in Egypt. The powers also had drawn the attention of her Majesty's Government to the question of the freedom of navigation of the Suez Canal, and point out that Lord Granville had expressed a favorable opinion to an agreement on that subject to be adopted and enforced by the concert of Europe.

These proposals produced much excited debate at Cabinet councils. An English journal of that day declared that "it is impossible not to discern certain indications of the same hostile spirit in the recent conduct of Germany." A French journal said, "These proposals were intended to remind England that her intervention can not be allowed to deprive the Egyptian question of its international character and interest."

To these propositions Lord Granville offered amendments which appear in the following letter, addressed to the courts of Berlin, Vienna, St. Petersburg, and Italy, through the French ambassador, dated Paris, Jan. 23, 1885: "Lord Granville has submitted to our ambassador at London his reply to our united communication upon Egyptian affairs. The English Government recognizes the extent of the concessions that the powers make in consenting to the application of tax upon strangers and the temporary sacrifice in favor of the creditors of Egypt. It accepts as a super-privileged loan of £9,000,000 the collective guarantee upon the basis of the Turkish loan of 1855. It admits the representation *à la caisse de la dette* of the German and Russian Governments, but in all that concerns an international *enquête* to be made, it esteems that the adoption of such a measure would injure in this moment the authority of the Khedive, and the success of his efforts to re-establish financial order; it admits, however, that in two years, if it appears then necessary to render permanent the service imposed upon creditors, an international *commission d'enquête* could be instituted, like that one which preceded the law of liquidation. The English Government adheres to the views of Europe in all that touches the liberty of the Suez Canal, and consents that the question may be made the subject of a treaty; finally, it abandons its propositions relative to loans, and administrators of the Daira and the Domains. The result of the communication is a real desire for conciliation and a deference for the views of the powers. All of their propositions are accepted; the principle of the *enquête* being admitted, also the temporary sacrifice asked of the creditors. I do not see any great objections against the adjournment to two years of the *commission d'enquête.* It seems logical to hope that the situation then will be of such a nature that England herself will recognize the occasion to re-establish the creditors in all their rights. I think we may then accept the proposed basis, and that there is an interest to do so promptly. The resolution of the English Government has been communicated probably to the ambassadors at London of all the powers interested." FERRY.

These propositions were approved by the powers, and were signed the 17th March, and were subsequently made the subject of a declaration and imperial firman by the Sultan—not, however, without the habitual *escarmouche* which makes the Turk unutterable. At a special Cabinet council at Yildiz Kiosk, although the Sultan was willing, the Grand Vizier raised objections—(1) that the Porte could not consider itself bound to sign a convention made by a foreign government outside of its own initiative; (2) that it was urged that the Porte could not be a party to any condition for the guarantee of the loan; (3) that the mention in the convention of the necessity for paying the indemnities for the bombardment would imply the recognition of, or acquiescence in, the responsibility for an act of aggression, against which at the time the Porte had formally protested; and (4) that the ministers could not advise the Sultan to consent to that clause in the convention under which his Majesty was declared to accept a decree of the Khedive on the subject in question. When this became known, an ultimatum was delivered, declaring that unless a prompt decision were taken sanctioning the loan, the payment of the Egyptian tribute would be suspended, entailing virtually the severance of Egypt from the empire. The result of this financial convention, which was ratified by the French Senate, July 7, 1885, reasserts the authority of the powers in Egypt, and withholds for two years that interference which is inevitable, in order to permit England to attempt to bring order out of chaos, which she has signally failed to do as yet.

Mr. Edward Vincent, financial adviser to the Minister of Finance, has published his financial creed for 1885. He says, "It is clearly the duty of the Egyptian Government to make every endeavor to resume payment in full in 1887." He estimates the revenue for 1885 at £9,352,515, to which he adds for increased tobacco duties, £140,000; taxes on Europeans, £100,000; spirit-licenses, £20,000; reassessment of land improved by irrigation, £70,000; optional tax in lieu of the *corvée,* £240,000; total revenue, £9,922,515.

The expenditure, including the Moukabala, the cost of the army of occupation, and the Suez Canal shares, amounts to £5,237,000. The debt charge, including the new loan, and deducting the 5 per cent. tax, and also the sinking fund on the Preference and Domain, now abolished, is £3,683,699; to which Mr. Vincent adds the cost of the abolition of the *corvée,* £496,000; reductions in the land-tax, £200,000; reduction in the navigation dues, £35,000; and abolition of the export duty on cereals, £24,000; total expenditure, £9,675,699; leaving a surplus of £246,816. Even this showing of a hopeful financier is gloomy, and the shadow of the Mahdi and a threatened invasion render it all the more discouraging.

The returns of the revenue and expenditure of the Egyptian Government up to the end of July, which have recently been made public, show an amelioration in the former desperate condition of the country.

The revenue for the first seven months of

1885 amounted to £4,967,000, against an average for the corresponding period in the four previous years of £4,826,000.

The land-tax has given in 1885	£2,677,000
As compared with the four previous years which gave	2,737,000
The custom-house revenues amount to	497,000
As compared with former year of	412,000
The railway receipts amount to	830,000
As compared with former year of	677,000

The expense account, however, may show a deficiency at the end of the year.

The estimated receipts and expenditures for the years 1884 and 1885 were:

RECEIPTS.

ITEMS.	1884.	1885.
Land-tax	£5,172,699	£5,172,699
Tax on date-trees	89,099	89,099
Other direct taxes	304,405	304,405
Indirect taxes	1,968,542	2,061,300
Railways, custom-house of Alexandria, and telegraphs	1,311,000	1,389,000
Mail-boats	102,900	98,000
Revenues of other departments	91,150	101,000
Rent of Government property	79,900	78,000
Miscellaneous	45,308	56,000
Retained for pensions	52,731	60,000
New taxes	100,000	44,489
Total	£9,314,734	£9,453,992
Less short receipts	200,000	569,298
Total	£9,114,734	£8,884,694

EXPENDITURES.

ITEMS.	1884.	1885.
Tribute	£678,397	£678,397
Civil list and allowances	297,500	297,500
Cabinet of Khedive Tewfik	53,312	60,000
Soudan	110,000	100,000
Pensions	356,835	419,000
Administrative expenses	3,240,614	3,028,409
Total	£4,736,658	£4,583,306
Service of debt	3,720,129	
Total	£8,456,787	

The Italians on the Red Sea.—The interference of the Italian Government in the affairs of Egypt is an accomplished fact. Admiral Caimi, acting upon the orders from Rome, has occupied Massowah, and has issued a proclamation announcing that he occupied that place with the authority of his Government. Recent reports go to show that the *morale* of the Italian army of occupation is not all that is desired, and that, what with the hostility of both Egypt and Turkey, Italy has little reason for self-congratulation in what promises to prove a fruitless interference with the domain of Egypt.

The Affair of the "Bosphore Egyptien."—The "Bosphore Egyptien" was a journal published in French in Cairo after the English occupation. Its columns have been filled with caustic criticisms of the English administrators. Certain articles that appeared in the month of April of this year were deemed particularly offensive to the Government, among others the reproduction of an alleged proclamation by the Mahdi. This incident having incensed the Khedive, Nubar Pasha availed himself of an old order of suspension and caused the publication of the journal to be suspended on the 8th of April. It was claimed that it was the work of Nubar, who was enraged by the exposure of some of his well-known methods by the "Bosphore Egyptien." A demand was made by M. Taillandier for reparation and apology in the breaking open of the office of the "Bosphore," on the ground that the act constituted a violation of domicile. On the 18th of April M. Freycinet telegraphed: "Demand immediately that the office be opened and that the agents be punished. Cause the Government to understand, in courteous but firm language, that if the French Government does not obtain a satisfactory reply immediately, the Egyptian Government will hear further from the case." Nubar hesitated to reply, whereupon diplomatic relations between France and Egypt were broken off, and the diplomatic agent was ordered to leave Cairo. On the 29th, Egypt acceded to the demands of France, and Nubar was ordered to repair to the French consulate and offer an apology.

The "Bosphore Egyptien" thereupon resumed publication, but its editors having received notice from the French consulate that its abusive tone was likely to prove a barrier to the policy of the French Government in Egypt, it voluntarily suspended publication on the 1st of September. The *coup de théâtre* is made apparent when the "Bosphore" is succeeded by a journal entitled the "Progrès Egyptien."

General Gordon's Return to the Soudan.—Gen. Gordon succeeded Sir Samuel Baker as Governor-General of the Equatorial Provinces in 1874. His administration of those provinces, in contradiction to the generally accepted opinion, was neither a financial nor political success, but an absolute failure. In his book, "Colonel Gordon in Central Africa," he admits with his natural frankness that when he took possession of the country it yielded a revenue of £579,000. In 1879, in a letter addressed to the Minister of Finances in Egypt, he acknowledged an annual deficit of £109,000 and an annual debt of £300,000. After five years of wasteful administration, which can not be held to reflect in any way upon the absolute honesty of the man, but only upon his want of administrative capacity, he left the government, in which the seeds of the subsequent revolt had been sown, a charge upon the government at Cairo. Mr. Gladstone has said that the Egyptian Government was averse to his reappointment to the Soudan, an aversion which was shared by Sir Evelyn Baring, who was the British High Commissioner of Finance at that time in Cairo, and who had been the medium of correspondence upon that subject.

In January, 1884, Gen. Gordon returned to the Soudan, permission to do so having been accorded him during Mr. Gladstone's absence. Sir Wilfrid Blunt claimed that this rash venture was wholly without Mr. Gladstone's knowledge or consent. Mr. Gladstone, however, said in the House of Commons that "Gen. Gordon went not for the purpose of reconquering the Soudan, or to persuade the chiefs of the Soudan, the sultans at the head of their troops, to submit themselves to the Egyptian Government. He went for the double purpose of evacuating the country by extricating the Egyptian garrisons, and reconstituting it by giving back to these sultans their ancestral powers, withdrawn or suspended during the period of Egyptian occupation. We are unwilling, I may say we were resolved to do nothing which should interfere with the pacific scheme—the only scheme which promised a satisfactory solution of the Soudanese difficulty, by at once extricating the garrison and reconstituting the country upon its old basis of local privileges."

Gen. Gordon sent down the Nile, during the six months of leisure that followed his *entrée* into Khartoum, 600 Arab (fellah) soldiers and 2,000 civilians, and up to the 14th of December, 1884, he could have gone himself or taken the garrison to the succor of those who are reported as holding out even now in Sennaar. Until the fall of Berber, there is nothing to prove that he could not have taken away all the garrisons, men, women, and children. Instead of this, he proclaimed himself Sultan, distributed money to the people, proclaimed the re-establishment of slavery, and proffered the Mahdi the emirate of Kordofan. It leaves the impression that his purpose was to make himself in fact the Sultan of the country, and his proffer to the Mahdi would seem to be a proof of this. The fatal mistake committed by Gordon was that he insisted upon believing the Mahdi to be the chief of a simple revolt against an acknowledged oppression. Gordon said: "I am convinced that it is an entire mistake to regard the Mahdi as in any sense a religious leader—he personifies popular discontent. All the Soudanese are political Mahdis, as all Egyptians are political Arabis. The movement is not religious, but an outbreak of despair."

Circumstances had shown that Mohammed Ahmed was a duly accredited agent of several religious societies. As early as 1868 he was at Khartoum, and there received religious consecration, and was admitted into the *confrèries* of Sid-Abd-el-Kader, Sid-el-Djilani, and Sid-es-Senoussi, and in accordance with the formulas of his initiation had sworn to consecrate his body and soul to the interests of these orders. The prophet's ambition was therefore beyond the price that Gordon offered, which the Mahdi refused with disdain.

The siege of Khartoum that followed, the investment of the city by the Mahdi, the expedition to rescue the rescuer, Stewart's splendid march across the desert, the battles of Abouklea Wells and Metemneh, and death of the heroic Stewart and his gallant comrades, the repulse of the river-fleet under Wilson and Lord Beresford in sight of the beleagured city, the fall of Khartoum, the massacre, and the reported death of Gordon, all combine to present a picture of great dramatic interest. But it is in strange contrast to the lone figure who months before had set out across the desert of Korosko, ostensibly to rescue, but who, after the sacrifice of much treasure and many precious lives, has failed to be rescued.

There has been much bitter recrimination in England as to the responsibility that attaches to Mr. Gladstone for this result. It is difficult to understand in what way the statesman of Midlothian can be responsible. Lord Granville, in the House of Lords, Feb. 19 of this year, said: "Three weeks ago we had cheerful messages from Gen. Gordon, with whom, at least, we had got into somewhat closer communication, and our troops were triumphing over many material and military difficulties. It was on the 4th of February, at a moment when we were expecting to hear of the meeting between Sir Charles Wilson and Gen. Gordon, that the dreadful news arrived that that in which military attacks and attempts to starve the garrison had failed, was accomplished by an act of treachery against one of the greatest of our countrymen. This danger had hung over Gen. Gordon's head for weeks and months. It could not be averted by any precipitate action on our part; indeed, it appears to have been accelerated by the approach of our troops. I have been in the public service for many years, and in my own experience I do not remember such painful circumstances in which a government was called upon to form a very serious and grave decision. Before stating that decision, perhaps your lordships will allow me very briefly to refer to the character of Gen. Gordon's mission. When that distinguished man, in a spirit of perfect unselfishness, volunteered to go to Egypt, his instructions were to go to Suakin and report. He was also authorized to comply with the wishes of the Egyptian Government, which might be communicated to him by Sir E. Baring. It was left to him to decide whether either he or Col. Stewart should proceed to Khartoum. On his arrival in Egypt, with the full concurrence of Sir E. Baring and the Egyptian Government, and in consequence of his own suggestion, he received full powers from the Khedive as governor. It was understood that the operations were to be of a pacific character. The general expressed himself confident that the power of the Mahdi had been exaggerated, and he believed that with time and patience it was possible to evacuate the garrisons and also to establish some form of native government in the Soudan. He telegraphed that he considered there was no danger of the massacre of women and children. He was asked whether the report of the sending of an armed force to Suakin would be of use. His reply was, that he valued much more the rumor of the force than the force itself. His first proclamation was of a pacific character, but he soon afterward sent us a proposal that Zebehr Pasha, to whom he had been formerly opposed, should be sent to the Soudan. We knew that Zebehr Pasha was the deadly foe of Gen. Gordon—we knew it from his own words—but we also knew that the appointment would have constituted a danger to Gen. Gordon of a very urgent character, a menace to Egypt, and a great encouragement to the slave-trade. My lords, we agreed to any other form of assistance which he might prefer, and we placed at his disposal a sum of money which might be required for any purpose he deemed necessary. There was an alternative suggestion made, namely, to send native soldiers to Wady Halfai, and he also suggested the opening of the Berber route by some Indian troops. It was the unanimous opinion of the military authorities, including Sir Evelyn Wood and Gen. Stephenson, that, although the expedition to Berber might take place, it was one of great danger on account of the climate, and also one of extraordinary military risk. It would have been quite possible to send out a few hundred men—cavalry—who might arrive at Berber; but I venture to ask your lordships what would have been their position if they had arrived?

" With regard to Gen. Graham's force, it was impossible at that time to send that force; when it was finally decided, in August (1884), to send out an expedition for the relief of Gen. Gordon, the great preponderance of military opinion was in favor of that expedition taking the Nile route. This opinion was confirmed by many eminent officers, and by others who were competent to speak on the subject. There were not only military advantages but political advantages connected with that route. The object of sending the expedition was primarily to rescue Gen. Gordon and those to whom Gen. Gordon considered himself in honor bound, and also the defense against an attack on Egypt. There were other aims, viz., the evacuation of the garrisons, the establishment of some form of orderly government, and the checking the slave-trade. There is hardly any doubt as to the loss of Gen. Gordon, and, supposing that to be true, there were three ways in which we could deal with the matter. In the first place, we could instruct Lord Wolseley to retreat; in the second, to concentrate his troops; thirdly, we could give instructions to Lord Wolseley for the purpose of negotiating with the Mahdi. As to the first alternative, it seemed to us that there were overwhelming objections to it, both military and political. It would not only have exposed Egypt, which we are bound in honor to defend, to great danger of invasion, but it would also have exposed us to injury and insult, probably, in different parts of the world. We rejected that course. Well, with regard to negotiations, we never shut the door to them, either through Gen. Gordon or Lord Wolseley. But what overtures has the Mahdi ever made toward negotiations? And even for the purpose of negotiation, how could we have taken up a worse position than, notwithstanding our military successes, to have shown ourselves in a position of collapse in consequence of one act of treachery far from our troops? My lords, the decision we came to, after grave consideration, was that we were bound to tell Lord Wolseley what our political object was. We told him that it was to check the advance of the Mahdi, and for that purpose to destroy his power in Khartoum. We have left entirely to Lord Wolseley the discretion of either attacking Khartoum at once, or at a later period in the autumn of this year. I am not able to tell your lordships what decision Lord Wolseley has come to; we have given him, at his request, a large force to be sent to Suakin; and a railway is being made from that port to Berber."

Lord Wolseley's Expedition.—The 1st of January, 1885, found Gen. Wolseley established at Korti, on the Nile. The Mahdi was reported at Omdurman, closely investing Khartoum. Lord Wolseley thus held one angle of the right-angled triangle movement which had Omdurman or Khartoum as its apex and objective point. The dispatch of the expedition of Sir Herbert Stewart, on the 8th of January, with a column of 1,500 men, across the Bayada Desert to Gakdul and Metemneh, was naturally followed by a movement under Gen. Earle toward Abou Hamed, to secure his base and protect his communications, which were constantly being threatened by the enemy, who held the Korosko Desert route at Abou Hamed.

On the 17th January Gen. Stewart was attacked with desperation by the enemy at Abouklea wells. The British lost 9 officers killed, including Col. Burnaby, 65 men killed, and 85 wounded (12 per cent. of all present killed or placed *hors de combat*), most of them in a hand-to-hand struggle in the rush made into the square. On the 19th, at sunrise, Gen. Stewart was within five miles of the river, when he was again attacked in force, having barely time to construct a *zeriba.* Gen. Stewart received a severe wound, from which he died, and two newspaper correspondents, Mr. Cameron, of the "Standard," and Mr. Herbert, of the "Morning Post," were killed. Mr. Burleigh, of the "Daily Telegraph," was wounded. The command, in the order of seniority, devolved upon the gallant Lord Charles Beresford, but he waived it in favor of Gen. Wilson. The march was resumed toward Metemneh, which was found to be occupied in force. Shendy was then bombarded and a lodgment effected upon the river, where four of Gen. Gordon's steamers were in waiting. The commandant landed 500 men and five guns as re-enforcements. He had left Khartoum a month before, and reported that at that time Gordon wanted for nothing; in fact, he was told by the General to ask "why they had come?" On the 24th Sir Charles Wilson left in two steamers, with the Sussex regiment and the black troops, for Khartoum, Col. Boscawen being left behind in command of the intrenchments that had been thrown up at Gubat, on the Nile. Capt.

Pigott, of the mounted infantry, and three men, were dispatched with the news to Lord Wolseley, at Korti, where they arrived in safety on the 28th. Lord Wolseley had already dispatched a strong convoy of re-enforcements to Gakdul, and other regiments subsequently followed under command of Sir Redvers Buller. On the 28th of January Sir Charles Wilson advanced within sight of Khartoum under a hot fire of rifles and siege-pieces posted on the river-shore. The flag-staff, it was claimed, was seen on the summit ef the Government-House, but Gordon's flag no longer surmounted it. Sir Charles Wilson, therefore, determined to return, and proceeded down stream under a heavy fire. It was reported to them that Khartoum had fallen, through the treachery of Farag (this has been denied), and that Gordon had been killed. The steamer Bordène, on the 31st, struck upon a rock and was wrecked; the troops, however, were gallantly rescued by Lord Charles Beresford, and returned safely to Gubat. Sir Charles Wilson has been severely criticised for his failure to proceed to Khartoum on the 22d, and not having pushed into Khartoum in order to ascertain Gen. Gordon's fate beyond a doubt. These charges have been made the subject of parliamentary discussion and investigation, but nothing has been found to justify the reflections made against Sir Charles.

The conflicting accounts of the manner of the death of Gen. Gordon and the Europeans said to have been slain at the same time, are entirely apocryphal, and may be discarded, in which case there is room for the belief expressed in some quarters that Gordon may be alive, and that he abandoned Khartoum, and in his steamers either went to join the garrison at Sennaar, or kept on his way to Gondokoro, his former seat of government. A few months more may determine that which, at this moment, is presented as a possibility only.

Prince Hassan, brother of the Khedive, on the 18th of February was sent up to join the English forces with the ulterior object of naming him the Governor-General of the Soudan.

Lord Wolseley began his retrograde movement on the 23d of February. On the 28th Gen. Buller and Lord Charles Beresford arrived back at Korti. Gen. Brackenbury, who succeeded to Gen. Earle, killed on the 9th February near Dulka Island, also was ordered back to Korti. Lord Wolseley established his headquarters at Dongola.

In July of this year Lord Wolseley was summoned by telegraph to return to England. He transferred the chief command of the British force in Egypt to Lieut.-Gen. Sir F. Stephenson. It is assumed that Lord Wolseley returned for the purpose of conferring with Lord Salisbury and his colleagues with reference to future military movements in the Soudan, and to determine the line of frontier that may be ascribed to Egypt.

The Situation at Suakin.—Osman Digna has proved more than a match for Gen. Graham, who was charged with the operations from Suakin. On the 22d of March Sir John McNeill, in command of the Berkshire regiment, the marines, and a part of the Indian contingent, moved out of camp five miles from Suakin in the direction of Tamai. The squares advanced across the desert, the Berkshire regiment and marines in front, with four Gardner guns, the Naval Brigade, and a detachment of engineers following, and a second square composed of Indians and a camel-train. They were suddenly surprised by a large force of the enemy and considerably cut up. The enemy charged with reckless courage, leaping over the low zeriba to certain death. Their loss is estimated at 1,500, while that of the English was very severe, and a number of officers were killed or wounded.

As late as August 29 of this year, H. M. S. Grappler bombarded the rebels and put them to flight. Osman Digna, it is said, has gone to command the operations in the siege of Kassala, which town, notwithstanding the many accounts of its capitulation, still holds out. Later information reports that Ras Aloui, the Abyssinian general, with a considerable army of Abyssinians, has gone to the rescue of Kassala, and has defeated Osman Digna, and slain 3,000 of the Arabs.

Admiral Hewitt, of the British navy, the reader will remember, was ordered to proceed to Adowa from Massowah in January, 1884, to make a treaty with King John, and the expedition of this Abyssinian command is supposed to be the result of the negotiations of Admiral Hewitt, with a view to obtaining the aid of King John in opposing the Mahdi.

Arrest of Zebehr Pasha.—On the 15th of March of this year, Zebehr Pasha, in consequence of information received from Lord Wolseley, was arrested at the suggestion of the latter. He was taken on board of H. M. S. Iris, at Alexandria. His two sons, in charge of the police, were also brought down from Cairo and placed on board the same ship, which sailed from Alexandria with sealed orders. It has since transpired that father and sons have been incarcerated at Gibraltar. Zebehr is charged with being in secret correspondence with the Mahdi, cognizant of the Mahdi's movements, and a party to the death of Gen. Gordon.

Hussein Pasha Khalifa was the Governor of Berber in 1874 and in 1884. He was highly esteemed by Gen. Gordon and his chief of staff, and when the former returned to the Soudan in 1884, it was Khalifa who escorted him safely from Korosko to Berber, and thence to Khartoum. He surrendered Berber when overpowered by the troops of the Mahdi, and was taken prisoner. He arrived in Alexandria on the 12th of July, and claims that he was sent into Lower Egypt to announce the coming of the Mahdi, but that he took the occasion to come in and submit to the Khedive.

The Mahdi is reported to have died on the

8th of the Ramadan (June 21), of spotted fever or small-pox. The Caliph Abdallah has been appointed to succeed him.

Death of Olivier Pain.—The "Intransigeant," M. Rochefort's journal, on the 17th of August, published a letter from one Selikowitch, in which the latter, who had been in the "Intelligence Service" of the English army in the Soudan, asserts that Olivier Pain had been shot by order of the military authorities. The English military authorities, replying to these accusations under date of the 21st August, said: Pain went up the river in the spring of 1883, with the object of joining the Mahdi; he was obliged to return to Halfai and to Esneh, but he succeeded in the month of July, due to the influence of a French inspector of sugars at Erment with the Bedouins, and went to Obeid, where he arrived last year; then he went to the Mahdi at Rahod. He did not go to Khartoum with the Mahdi, but died last autumn on the White Nile, *en route* for Omdurman. This is confirmed by several witnesses, Hussein Khalifa, Muralli Bononi, and others. Major Kitchner, under date of 22d August, says: "The story of the death of Pain is false. I never received any instructions about Pain, and I never attempted to take him."

M. Rochefort called meetings of indignation in Paris, and even went so far as to threaten that Lord Lyons should be kept as a hostage. The French Government was obliged to take note of these proceedings in the interest of order, and suggested in a friendly spirit to the British Government that it would be desirable to furnish loyally on its side all information establishing the fact of Pain's death, and under what circumstances it occurred. Nothing further has been learned of the matter.

Death of M'Tsé, King of Ugandi.—The death of King M'Tsé has been again reported, this time as having occurred on October 11, 1884. He is said to have been succeeded by M'Wauga, a lad whom the missionaries claim to have converted. No explanation, however, has been given of the means by which the news has been received, and it may therefore be considered as doubtful. M'Tsé was first visited by Speke, then by Chaillé Long, and subsequently by Stanley. The latter, entirely ignoring the visits of the explorers who had preceded him, wrote a fantastic account of the genealogy of M'Tsé, and ended by converting him to Christianity!—a feat which a few days afterward had a singular disproval, when M'Tsé, in order to show his accuracy of aim (to M. Linant, who was then visiting him), leveled a gun at one of his wives and blew her brains out.

The Insurrection of Mohammed Achmed, el-Mahdi.—Mohammed Achmed was born at Dongola, in the town of Khanag, in the year 1842. His father was a carpenter and boat-builder. Mohammed, like many of his nomadic people, went to Khartoum. There the Dongolowee are engaged in the ivory-trade and slave *razzias* carried on by the Zeribas formed throughout Central Africa. The irregular troops, known as *Hotariah*, in the pay and service of the merchants at Khartoum, are composed of the natives of Dongola, and are called *Dongolowee.* Mohammed Achmed is said to have been interested in these *comptoirs*, but shortly after became religious, and, after instruction in the Koran, retired to the island of Abba, situated in the Bahr-el-Abiad (White Nile), in 13° north latitude. There, surrounded by the Bagarrah tribes, a brave and warlike race, resembling the Bedouins of Lower Egypt, he gained a reputation for sanctity which caused him to be looked upon by the simple people as the chosen messenger of God—el-Mahdi.

The spirit of discontent which had been bred among the compatriots and followers of Zebehr, who had been badly treated by the Governor-General of Khartoum (Ismail Pasha Ayoube), and imprisoned in Cairo, where he had gone to plead the justness of his cause, and the ruin of the Dongolowee merchants in Khartoum by the proclamation of a monopoly of ivory (issued by Col. Gordon, in 1874), were the germs that bred the present insurrection. The religious institution of Sid-es-Senoussi, like those of Sid-el-Azhar and Sid-Abd-el-Kader and Sid-el-Djilani, who are on the *qui vive* to convert a popular discontent into a religious crusade in the interest of the Faith, seized the opportunity to confer upon the hermit in the cave of the island of Abba the title of Prophet.

These religious institutions have their *siège* in Cairo, in Tunis, Tripoli, and Algiers. Sidi Mohammed Ben Ali es-Senoussi is said to have been the founder. He was born in Algeria, in the neighborhood of Montagavem; by profession a jurisconsult, he was initiated at an early age into the mystic philosophy of the Chadheliya. He left Algeria and went to Cairo, where he taught law and theology in the University of El Azhar; thence to Mecca, where he became the disciple of Ahmed Ben-Edris, the great doctor of Chadhelism, and at his death was designated as his successor. The doctrine, of which Sidi Mohammed became the apostle, consisted in rendering homage to God alone; to honor the saints during this life, but without continuing to venerate them after their death, not excepting Mohammed, the most perfect of all men; to renounce the world, and not to permit the luxury of ornament, except to women; that men should look only to their weapons of war, and obey those chiefs only who rigidly followed the precepts of their religion; to have no relation with a Christian or a Jew, and to consider all as enemies who are not tributary to the faithful; that the law of "Djehad," or holy war, opens to the believer a seductive perspective; to the fervent soul, the sensual joys of a future life; to the "Moujahed," who fights for his faith, the delights of "Djeuna," paradise; to the deserter, the pains of "Gehennah"—hell. In these *confrèries* the hatred of the Frank and Israelite is engendered and nurtured. And there the doctrine of Panislamism is taught and spread to those hundred millions of the faithful who long for that universal empire promised them by the Koran.

The thirteenth century was about to close, and the fourteenth of the Hegira, as foretold, would open to the world of believers an era of prosperity, of grandeur and glory. Sidi Mohammed Ben Ali es-Senoussi, at Mecca, thereupon sent his trusty agents to Mohammed el-Achmed in his cave at Abba. They found him upon his knees at prayer. Touching his shoulder with the tip of his finger, as if there were impiety in the act, the deputy disclosed the object of his visit. "The Sid-es-Senoussi," said he, "bids me say to you that you are called to take charge of an army."

Mohammed remained for several moments as if in prayerful meditation, and then replied that he had made a vow to live apart from the strife of the world unless God ordered otherwise. "But it is God who orders it," replied the orator; "Sid-es-Senoussi has had the revelation, and thou art declared to be the *Mahdime*, the Sublime. Thou canst not, then, by an excess of humility, abstain from the designs of Allah upon thee." The other deputies thereupon clapped their hands, and Mohammed, rising, took the proffered sword and, raising it aloft, cried, "El Hamdou, illah!" (Praise be to God!) Turning to those around him, he cried: "O ye *Mouslimine* (resigned to the will of God), here I am the *nazzir el Din* (the aid of thy religion). May God keep me upon the necks of the infidel, and may his benediction rest upon us! *Machallah!*"

The *ulemas* of Khartoum pronounced against Mohammed Achmed, and he was likewise discredited at Cairo and Constantinople, but it was of little avail, for the cause of the False Prophet grew steadily, and was strengthened by the weakness of the Egyptian governor. Early in July, 1881, Raouf Pasha, then Governor-General of Khartoum, ordered Mohammed Achmed to return to Khartoum. A battalion of black soldiers was sent to enforce his authority. On the 11th of August they reached Abba. The troops debarked and advanced toward the cave of the Mahdi, where they suddenly found themselves in an ambush surrounded by 4,000 men armed with swords and lances. The surprised soldiers fired a volley and fled, leaving 120 of their party dead upon the field. Raouf Pasha, on hearing of the disaster, ordered all the available troops from Khartoum, Sennaar, Fashoda, Kordofan, and Berber, to assemble near Kawa, on the White Nile. The garrisons were really depleted for this expedition; 1,400 troops were thus concentrated at Kawa. Raouf was a cowardly, timid man, with no military knowledge; he did not attack the enemy, as common sense and duty dictated, and deserved to have been shot, and would have been by any other but the Egyptian Government. Prompt action at the moment would have crushed what was in fact a local and comparatively insignificant rebellion. Raschid Bey, the Mudir of Fashoda, was made of better material: of his own accord he marched against the Mahdi, who held the mountain of Gadir, 150 miles northwest of Kaka, on the White Nile, but suffered a defeat on account of his insufficient numbers.

Raouf Pasha was recalled on the 4th of March, 1882, and Abd-el-Kader Pasha was appointed to succeed him. In order to show the wretched character of the administration of the Soudan, it is only necessary to say that in the interregnum Giegler Pasha assumed temporary charge. This was one of Gen. Gordon's appointments. Giegler, an uneducated German, who had occupied some inferior position prior to his arrival in the Soudan as a common workman on the telegraph, had been created, in a spirit of caprice and derision, by Gen. Gordon, a *bey* and then a *pasha*. Gen. Gordon, it is necessary to say, had at the same time made several of his servants, including his cook and valet, officers of the Soudan, with the rank and pay of generals of brigade (of these, Gessi Pasha was also one). It is also a part of the history of the insurrection that they contributed not a little to the rebellious spirit in the Soudan. The people of the Soudan, not unlike the negroes on the Southern plantations in America, objected strongly to being commanded by those of their own caste.

On the 6th of April the garrison of the town of Sennaar attacked a large force of Arabs led by a nephew of the Mahdi, but they were repelled, and, retreating, shut themselves up in the town, which was given up to murder, plunder, and fire. Fourteen foreign merchants, nine officers, and one hundred soldiers, were put to death. The Chillouks were now in revolt. On the 15th of April another detachment was sent against the enemy, and was cut to pieces, with a loss of 150, by the rebels at Mesalameh.

On the 3d of May Giegler Pasha, at the head of a considerable force, attacked Sherif Ahmed Taha near Abou Haraz, on the Blue Nile. The sheik Abd-el-Kerim Bey, chief of the powerful Shukuriyeh tribe, 2,000 of whom were mounted and clad in armor, in reality commanded. The rebels were routed, and the head of the sherif was sent to Khartoum and exposed in the streets. Giegler, having charge of the telegraphs, said nothing to the Government of the victory, due entirely to Abd-el-Kerim Bey, of the Shukuriyeh, but claimed the honor for himself. It naturally alienated the tribe from the Government.

Abd-el-Kader Pasha reached Khartoum on the 11th of May, 1882, and assumed the duties of Governor-General of the Soudan. At Khartoum the formation of irregular regiments of Shaggyeh and Dongolowee was being actively pushed forward. Re-enforcements were coming in from Berber, and were mostly sent into Kordofan, where great insecurity prevailed. One thousand troops had been pushed forward to Kordofan. In the latter part of May, Yusef Pasha marched against the Mahdi, still on the

Gadir mountain; on the 17th of June he met the rebels in a densely wooded country, and was routed, and his command was badly cut up. In Kordofan the rebels attacked Bara on June 28, but were repelled with great loss.

Toward the end of June the works of defense for the protection of Khartoum were begun at the south of the town. Abd-el-Kader resolved to form negro battalions, and every slave-owner in Khartoum was called upon to give up a certain number of slaves for the purpose. In August a state of siege was proclaimed in the city. Five forts had been constructed, each armed with one gun. The town was divided into four military sections, and pickets patrolled the streets both day and night. As a further protection, a canal was cut south of the town, joining the two branches of the Nile, but not till November. The Kababish Arabs, an important tribe occupying a large tract between Kordofan and Dongola, were in revolt, and were encamped within a day's march of Khartoum.

During July and August minor engagements were fought upon the lines of communication between the White Nile and Kordofan, which almost always resulted in favor of the rebels. The commercial town of Shott, on the road from Duem, on the White Nile, to El-Obeïd, was totally destroyed, the male population was put to the sword, and the women and children were carried off into captivity.

In the beginning of August the insurgent forces were divided into three principal groups: The Mahdi, with his troops, on the mountain of Gadir, in the Takalla district; a second army was in Kordofan; and a third stretched along the White Nile from Duem to Abba on the western bank, and from Kawa to Marabieh on the eastern. On the 19th of August the rebels were again defeated near Bara, and El-Obeïd was subsequently revictualed.

The rebels, operating along the western bank of the White Nile, under Ahmed Wad-el-Makshef, were attacked by the Egyptian troops near Duem on the 28th of August, and routed, leaving 3,500 dead on the field. This defeat frustrated the march upon Khartoum. The Mahdi now took the field in person and advanced upon El-Obeïd. The garrison at El-Obeïd consisted of 6,000 men, armed with Remington rifles, sent them by Abd-el-Kader in anticipation of a siege. On the 8th of September the Mahdi made an assault, repeated on the 11th and 14th, which was repelled with great loss. The Mahdi was now deserted by many of his followers. At El-Kona, however, the Egyptians under Ali Satfi Bey had been attacked. The losses of the Egyptians, including Satfi, were 1,100 killed, and 1,150 rifles and a large quantity of ammunition and stores.

Abd-el-Kader Pasha then telegraphed that he must have 10,000 men. In November, 2,000 to 3,000 men who had fought under Arabi had been concentrated at the *Barrage* on the Nile, and were being equipped for the expedition. Ali-el-Din Pasha, Governor of the Red Sea Provinces at Suakin, became the moving spirit by which these timid and doubting troops were quickly dispatched across the desert. By the middle of February, 1883, 100 dismounted cavalry, 100 gunners, and three regiments had been sent forward. Lieut.-Col. Stewart, of the Eleventh Hussars, arrived in Khartoum on the 16th of December. He had been sent by the English Government to inquire into the true state of affairs. In the mean time five battalions, 4,170 men, had arrived from Cairo, and were encamped at Omdurman. On the 11th of February a messenger arrived at Khartoum, confirming the news that Bara had fallen on the 5th of January. By this surrender 2,000 troops, besides a considerable quantity of arms and ammunition, fell into the hands of the rebels. Five days afterward the news arrived that El-Obeïd had capitulated on the 17th of January, and that the whole of the Kordofan was in the hands of the Mahdi.

Abd-el-Kader took the field on the 13th of February, and on the 24th defeated the enemy at Meshra-el-Dai, and again on the 4th of March at Sekhêdy.

On the 4th of March Col. Hicks reached Khartoum, and with him Lieut.-Col. Colborne, Lieut.-Col. Coetlogen, Maj. Martin, Maj. Farquhar, Capt. Warner, Capt. Massey, Evans Walker, and Surg.-Gen. Rosenberg. Col. Hicks had been appointed chief-of-staff of the army of the Soudan, with local rank of major-general—but it was intended that he should direct and be responsible for all preparations and operations; in fact, that he should in reality be the commander-in-chief, while nominally holding a subordinate post. Suleiman Nyasi, whose military career dated back to the days of Mehemet Ali and the Crimean War, was consequently named to the chief command, but with the understanding that he was to pay strict attention to and carefully follow out Gen. Hicks's instructions and plans; but his indolence, apathy, and ignorance, and apparent malignity and jealousy, caused him to act in anything but the spirit of the instructions given him at Cairo. On the 26th of March Ali-el-Din Pasha was proclaimed Governor-General of Khartoum and the Soudan, and on the same day Hussein Pasha left for Sennaar, to inform Abd-el-Kader of his removal from office. After months of preparation and insignificant skirmishes with the enemy, Gen. Hicks, on the 9th of September (1883), set in motion a column estimated at 10,000 men, four Krupp field-guns, six Nordenfeldts, 500 horses, and 5,500 camels, to attack the Mahdi at El-Obeïd. On the 19th of November a messenger returned to Khartoum with the astounding intelligence of the entire destruction of this expeditionary force.

In the mean time the operations from Suakin were far from satisfactory. Osman Digna, a well-known slave-dealer, assisted by his nephews Ahmed and Fagi Digna, had raised the Erkowit, Sherah, Mishab, Migadoff, and Bishirieh tribes, in the name of the Mahdi. Tewfik Bey immediately summoned Digna to come to him at Sinkat. He arrived on the 5th of August, but accompanied by about 1,500 armed followers, and demanded in the name of the Mahdi the surrender of Sinkat and Suakin, with all the arms and treasure they contained. This being refused, Digna attacked, but was repelled, and retired with a loss of sixty-three killed and many wounded.

On the 18th of October, 156 Egyptian soldiers and two officers were massacred in a mountain-defile about twenty miles from Suakin. They were on their way to support Tewfik Bey, surrounded by the rebels at Sinkat.

On the 15th of November a body of Egyptian troops, variously estimated at 250 to 500 men, was attacked near Tokar by a band of insurgents and completely routed. Commander Moncrieff, her British Majesty's consul at Suakin, was among the killed.

Sinkat has since fallen, and the garrison with its gallant commander was massacred in the unsuccessful sortie. The battles of Tokar, El-Teb, and Trinkitat, which followed, have added prestige to the arms of the Prophet.

News as late as the 7th of October of this year from Suakin reports that Osman Digna has been defeated at Kufeit, where he was strongly intrenched and in force, by Ras Aloula, the commander of an Abyssinian army numbering 8,000 men, who was marching to the relief of the garrison at Kassala. The contending armies fought for several hours, when the rebels were defeated with a loss of 3,000 men and retreated.

The insurrection in the regions of the Upper Nile seems wrapped in mystery since the reported death of the Mahdi. Mohammed-el-Khair, the Emir of Berber, is said to have gone to Khartoum to restore order there, for, since the assassination of El-Thaiski, successor of the Mahdi, the city has been given up to pillage and anarchy. On the 15th of December the rebels attacked Ferkat, near Dongola, and burned and pillaged that and other villages.

Gen. Gordon returned to the Soudan on the 18th of January, arriving there one month later, as reported, amid the rejoicings of the people. He went ostensibly to their rescue, but, after sending away an inconsiderable portion of the inhabitants, he elected to stay, and with him the greater part of the population, who were carried away with his generous distribution of money, and proclamations re-establishing slavery. It is significant that Lord Churchill, in a speech at Birmingham on Oct. 23 of this year, said that the Conservatives were responsible for Gordon's mission to the Soudan.

The Fall of Khartoum.—Col. Kitchener, Chief of the Intelligence Department of the English army, has published a report made up from every possible source. It is not conclusive as to the death of Gordon, which has been accepted as a fact on account of a mass of evidence, but which is nevertheless absolutely conflicting. On the 14th of December, 1884, Gordon wrote that the city could not hold out more than ten days. Since the 3d of November communications had been cut with Omdurman, and rations were scarce. It appears that on the 6th of January, 1885, Gordon allowed all the inhabitants who wished to quit the city to go over to the camp of the Mahdi. Out of 34,000, 20,000 took advantage of the permission. On the 13th Omdurman capitulated and fell into the hands of the Mahdi, who treated the prisoners well, in order to encourage the garrison of Khartoum to desert. Besides, he established batteries along the White Nile, to close the river to Gordon's steamers. The works of the enemy approached nearer and nearer the southern defenses of the city. Gordon attempted on the 18th a sortie, and caused a great loss to the enemy, but without being able to dislodge him from his positions. The famine was fearful; asses, dogs, cats, and rats were eaten. The Egyptian troops received now only a ration of gum, and bread made out of the pith of the palm-tree. In spite of all suffering, Gordon was able to maintain the *morale* of his troops; he felt that the English army could not be far away. He kept this before them, had his eyes everywhere, and displayed a feverish activity. All witnesses declared that during the period of great danger of the last fifteen days, he could not have slept two hours at a time.

On January 20th the news of the battle of Abou-klea threw the camp of the Mahdi into the greatest consternation. The rebels, upon learning of the arrival of the English on the river on the 22d, determined to make the assault upon Khartoum. It is certain that the Mahdi wrote to Ferig Pasha to propose to him to give up the city and negotiate with him its capitulation. It is also certain that the Egyptian general informed Gordon of these propositions, and supported them with great earnestness; for on the 23d of January they had a violent discussion, and Gordon went so far as to raise his hand against his lieutenant. The latter went away from the palace furious, and refused all the attempts of his colleagues to reconcile him to his chief. The morning after there was a council of the Notables, to discuss the propositions of the Mahdi. Gordon declared that the Notables were free to do as they pleased; but, for his part, he would not capitulate. On Sunday, the 25th, Gordon was very much fatigued, and showed himself but little during the day; but he had several interviews with the most influential inhabitants. Without a doubt he attempted to sustain their courage. Every one understood that the end was at hand. At night the distress was so general that a great number of soldiers, pressed by hunger, quitted the ramparts and went through the city in quest of food. This fact caused much uneasiness to the Notables and inhabitants, many of whom went out to replace the soldiers. This had happened before, but never with such unanimity.

On Monday, the 26th, toward 3.30 A. M., the army of the Mahdi made a vigorous assault upon the south front; his two principal objective points were the Bouri gate, at the eastern extremity of the line of defense on the Blue Nile, and the Mesalamieh gate, on the western extremity on the White Nile side. The first of these two points resisted the attack; but at the Mesalamieh the Mahdists, commanded by their emir, Wad-el-Nijoumi, succeeded in getting across the fosse, which they filled up with straw, fagots, and mattresses. When the troops at the Bouri gate found themselves about to be taken in the rear by the enemy in the interior of their works, they gave way, and the city was at the mercy of the Arabs. Gordon was not informed either of the attack or of the entrance of the enemy. A part of the responsibility on this score weighs undoubtedly upon Ferig Pasha. But it is just to say that the direct accusations of treachery made against that officer are refuted by all the witnesses who escaped from the disaster, notably by thirty Egyptian soldiers who lately arrived at Dongola, and by Abdallah-ben-Ismail, one of their battalion commanders. It is well to add that the commandant of the Mesalamieh gate, Hassan Bey Balmasoni, weakly defended his position, did not inform Gordon of the danger, and afterward took service under the Mahdi; but, in the opinion of Col. Kitchener, the fall of Khartoum was no less brought about by the suddenness of the attack, than by the fact that the garrison, worn out and exhausted, was no longer capable of serious resistance. The Arabs spread immediately through the city, massacring all in their way.

How was Gordon killed? It is this which has not been perfectly elucidated. It seems that it occurred near the palace, where his corpse was seen by many witnesses. The only one present at his death is an Egyptian slave, who tells this story:

"Hearing the cries and the tumult in the city, I awoke my master, saddled his ass, and followed him in the direction of the palace. We met Gordon Pasha, who had come out in the company of Mohammed Bey Mustapha, Ibrahim Bey Ruchdi, and twenty policemen. We went with him in the direction of the Austrian consulate. Near the church, we met a troop of rebels who arrived in the plaza. They fired upon our group; Gordon was at the head; he fell with one of the policemen and two officers. The others fled."

Another witness says that he saw Gordon's head cut off before the palace-gate:

"The massacre continued six hours. More than four thousand victims were slain in the streets. All the bashi-bazouks and soldiers (Egyptian), all the regular *schagaï*, a great number of inhabitants and slaves, were put to death. The Austrian consul, M. Hansel, the Italian consul, M. Nicola, a European doctor, the secretary of Gordon, and many others, were slain. Only the black troops were saved. About ten o'clock the Mahdi sent an order to stop the massacre. The Arabs then commenced to pillage the city, and to make up packages of everything which they wished to carry away. The survivors were compelled to go to Omdurman, where they were stripped of everything. The women were distributed among the Arabs, and the men, after two or three days' surveillance, were left free to do as well as they could. Ferig Pasha, ordered to say where Gordon's treasure was hid, naturally could not do so, for it did not exist, and was butchered in the market-place at Omdurman. The greater part of the Notables were questioned for the same object. The Mahdi had promised his partisans that they should find immense riches in Khartoum. Their disappointment was made apparent in the most brutal treatment of their prisoners. The Baggarah, when they could find nothing, deserted the Mahdi, and went over to those who opposed him in Kordofan."

It is somewhat difficult to estimate exactly the number of white prisoners actually in the hands of the Arabs. Up to the fall of Khartoum there were forty-two Greeks, five Greek women, one Israelite woman, and two Catholic priests. The siege lasted three hundred and seventeen days. Never, perhaps, has a place fallen under such dramatic circumstances, and when an army of succor was at hand.

Gordon's Journal.—This book appeared during the year, and was published simultaneously in London and New York. The fall of Khartoum and supposed death of Gen. Gordon is the climax of the many catastrophes that have followed the occupation of Egypt.

Gen. Gordon's journal was awaited with very great interest, and it was looked upon as the pit into which Mr. Gladstone's ministry was to stumble and fall. The frank avowals of Gen. Gordon himself do not create the impression that Gladstone is in any way to be blamed for the mission to the Soudan. Gladstone said, "We were resolved to do nothing which should interfere with the pacific scheme." Gordon chose to replace this pacific scheme by one more in accord with the sentiments of those at home in favor of an aggressive policy. He began by announcing himself the Sultan of the Soudan, and when the Mahdi refused to become his vassal as the Emir of Kordofan, Gordon undertook the offensive. The evacuation policy was only carried out in a half-hearted way, and precious months were allowed to go by until those who had elected to remain with him were no longer able to go, for Khartoum was invested. That he could have gone, garrison and all, is undeniable. It is highly honorable to the chivalrous soldier that, having aroused the confidence of the people of Khartoum in his ability to maintain himself, naturally loath to abandon their homes and worldly goods, he resolved to share their fate. He recognized his responsibility and did not shirk it. He says, in justification of his course: "The people up here would reason thus if I attempted to leave: 'You came up here, and, had you not come, we should have some of us got away to Cairo, but we trusted in you to extricate us; we suffered and are suffering great privations, in order to hold the town. Had you not come, we should have given in at once and obtained pardon; now we can, after our obstinate defense, expect no mercy from the Mahdi, who will avenge on us all the blood that has been spilled around Khartoum. You have taken our money and promised to repay us. All this goes for naught if you quit us; it is your bounden duty to stay by us, and to share our fate. If the British Government deserts us, that is no reason for you to do so after our having stood by you.' I declare positively, and once for all, that I will not leave the Soudan until every one who wants to go down is given the chance to do so, unless a government is established which relieves me of the charge. Therefore, if any emissary or letter comes up here ordering me to come down, I will not obey it, but will stay here, and fall with the town, and run all risks."

On page 314 he formulates the position thus: "It may be turned as one likes, three prominent and undeniable facts exist: her Majesty's Government refused to help Egypt with respect to the Soudan, refused to let Egypt help herself, and refused to allow any other power to help her; this can not be disputed or explained away. Lord Dufferin's dispatch was, 'Hands off.' The resignation of Cherif was the prohibition of allowing Egypt to help herself. This tardy succor under pressure, and Baring's dispatch, established the unwillingness to help." But, then, Gordon knew of this unwillingness of Mr. Gladstone in the beginning, and he undertook to brave it. Then comes the persistent appeal for Zebehr to be sent up to him—a bold, bad man, whose recent arrest is ample proof of the wisdom of the Government in refusing to let him go.

On the 22d of November, 1884, he says the present state up to date is: "We have had passing through the hospital 242 wounded. We have had some 1,800 to 1,900 killed between 17th March and 22d November. The Arab camps are about five miles from the city." The last act, so far as is known, is an entry, Dec. 14, and ends thus: "Hard work this, of the expeditionary force, and I ask for no more than two hundred men; if they do not come in ten days, the town may fall; and I have done my best for the honor of our country. Good-by.—C. G. Gordon. You send me no information, though you have lots of money.—C. G. G."

In reading his dramatic story of the siege of Khartoum, one can not fail to appreciate the genius of the soldier, but the misapplication of the genius is painfully apparent. The lives of Stewart, Earle, Burnaby, and the thousands who have fallen, are a great price to pay for such a piece of business, and Gordon seems to appreciate it when he says, "What a farce, if it did not deal with men's lives!"*

ELECTION LAWS. Registration.—On Dec. 1, 1885, the Supreme Court of Ohio declared unconstitutional the registration law recently enacted by the Legislature for the government of elections in Cincinnati and Cleveland. Edward Daggett, an election-officer in Cincinnati, had been arrested for receiving the vote of a person who was a duly qualified voter, except that in consequence of absence from the city he had not been registered before the day of election, as required by the registration law. The Supreme Court set aside the law and ordered the discharge of Daggett. The opinion, which is reported in 43 Ohio State Reports, was written by Judge Atherton, and concurred in by three of his colleagues. Judge McIlvaine did not take part in the decision.

The Court admits that the Legislature has the power to pass a reasonable and proper registration law. "It is competent for the Legislature," says the opinion, "under the general powers of legislation granted to it by the Constitution, to provide for a general registration of voters, and to make the fact of registry a condition to the exercise of the right of voting. The power being conceded, the Legislature is supposed to know best the wants of the State in that regard, and it is not for the courts to question the wisdom of making such enactments. Registration is one of the modes in which purity in elections may be attained, and every honest and qualified voter has an interest in securing the integrity of the ballot and excluding the ballots of the dishonest and unqualified. Every honest voter is as much injured by the reception of a fraudulent vote as by the exclusion of his own, and it makes but little difference to him whether his vote is wrongfully excluded or completely neutralized by the ballot of a person unqualified. Among the safeguards that we deem most efficacious to prevent fraud, insure integrity at the polls, and enable the honest and qualified elector to exert his just influence and control the result, is a wise system of registration; and we are satisfied that it is within the constitutional province of the Legislature to enact a wise registration law, that, without in any way abridging the rights of qualified electors, or adding any unlawful qualifications to the voter, may secure the purity of the election by a registry law so framed as to be a reasonable regulation of the mode of exercising a constitutional right. . . . But while the Legislature has full power to regulate the right to vote, it has no constitutional power to restrain or abridge the right, or unnecessarily to impede its free exercise. Under the pretense of regulation, the right of suffrage must be left untrammeled by any provisions, or even rules of evidence, that may injuriously or necessarily impair it, and so the citizen can not forfeit the right except by his own neglect, or by such peculiar accidents as are not attributable to the law itself." The Court then proceeded to examine the act in question. This provides that the registers shall meet on the third Thursday preceding every general election, and continue in session for the purpose of registering voters from 8 A. M. to 9 P. M., for six successive days. They are required to meet again on the Wednesday preceding the election for the purpose of revising and correcting the lists of voters. The act then declares that no vote shall be received on election-day unless the name of the person offering to vote has been duly registered on one of the designated registration-days. After citing these provisions, the Supreme Court said:

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* On the 12th of March Parliament voted a grant to the family of Gen. Gordon, consisting of a brother and two sisters, of the sum of £20,000. In order to perpetuate his memory, a committee has met in London, composed of the most distinguished men of that city, to propose the construction of a hospital at Port Said, to be known as the "General Gordon Hospital."

> It will be seen by the above that there are but seven days in the year when voters can register. These are the six days beginning on the 3d Thursday preceding the election, and the Wednesday preceding the election. There is no provision for registering at pleasure during the earlier part of the year, and no provision for proving his qualifications on election-day and voting. A voter who is the oldest inhabitant of the ward, and an elector in it for the greater part of his lifetime, if from absence, however necessary or unintentional, during the seven days, can not vote if his name is not on the registry. Many absentees may get home to vote, and if they were afforded opportunities during the year, might also register, whose right of suffrage must necessarily be lost under the act. How many mechanics may be absent pursuing their trades during the seven days! A large number of persons will be away on steamboat and other sailing-craft, and elsewhere, earning a support. A large number of students, a great many of the class usually termed commercial travelers, will be away, perhaps planning their trips to be home on election-day. A large number of citizens in government employ, at Washington and elsewhere, will be at their posts of duty, and may return to vote, but would hardly have the opportunity to return on a different day to register. Even the members of this court might be unable to register without a decided detriment to the public business, and might be compelled to elect between the neglect of important official duties and the loss of suffrage. Is it a proper regulation of the constitutional right and privilege to say that the right shall be lost unless the elector appears in person during these seven days to register? Is it reasonable to say that all these persons can not register either before or after the seven days; that they can not make application for registration in writing, upon oath, however well known, but must appear at these arbitrary times in person or lose their rights? As to this large class of persons necessarily absent during the time allotted for registration by the act, is this reasonable regulation, or is it an abridgment and impairment of the right to vote under the guise of regulation?

The Court then reviewed the decisions in other States in which registration laws have been held constitutional, and said: "We have been unable to find any case where a registration act has been upheld as constitutional which contained provisions similar to our statute. The necessary absence of a voter on the seven days provided in the statute for registration, either by sickness, imprisonment, or other lawful reason, absolutely forfeits for the time being his constitutional right of suffrage. He can not anticipate expected absence, and register at an earlier period. He can not prove his right by his affidavit or the affidavits of others, and excuse his personal presence at the place of registration. He can not, on the day of election, or within five days prior thereto, by any proof of constitutional qualification, supply the want of former registration. A foreigner who has taken out his first papers and made his necessary declaration to become a citizen, and whose right to full citizenship and the elective franchise will *ripen* during the five days before, or on the day of election, can not secure registration or the right to vote, because he can not prove in advance that the action of the court will naturalize him. . . . A registration law must be reasonable, uniform, impartial, and calculated to facilitate and secure rather than to subvert or impede the exercise of the right to vote. Believing the act in question unnecessarily, unreasonably, and injuriously to impair and impede the right of suffrage to the voter who is necessarily absent at the times fixed by the act for registration, we are unanimously of opinion that we are compelled to declare it to be subversive of constitutional rights, and therefore void."

It had been argued that, even if the act should be held unconstitutional and void as to voters necessarily absent, it might be sustained generally and as to all other classes of voters. The Court refused to adopt this view, and held that the entire law was void.

In 1868 the registry law of Pennsylvania was declared unconstitutional by the Supreme Court of that State. (Page *vs.* Allen, 58 Pennsylvania State Reports, 338.) The law was complex, imposed many burdensome restrictions on the right to vote, and was open to serious objections. Three judges concurred in the opinion of the Court, and two dissented.

The registration law of Wisconsin was declared unconstitutional by the Supreme Court of that State in 1880. The opinion is reported in 49 Wisconsin Reports, 555. Four of the five judges concurred; one dissented. The Constitution contained no clause relating to registration. The law required previous registration as a condition of voting, except in the case of persons who became qualified voters after the last registration-day and before the election. The Court said: "The elector possessing the qualifications prescribed by the Constitution is invested with the constitutional right to vote at any election in this State. These qualifications are explicit, exclusive, and unqualified by any exceptions, provisos, or conditions; and the Constitution, either directly or by implication, confers no authority upon the Legislature to change, impair, add to, or abridge them in any respect. . . . By the effect of this law the elector *may*, and in many cases *must* and *will*, lose his vote by being utterly unable to comply with the law by reason of absence, physical disability, or non-age, and an elector can lose his vote without his own default or negligence in these particulars. The law disfranchises a constitutionally qualified elector without his default or negligence, and makes no exception in his favor, and provides no method, chance, or opportunity for him to make proof of his qualifications on the day of election, the only time, perchance, when he could possibly do so. This law undertakes to do what no law can do, and that is, to deprive a person of an absolute right without his laches, default, negligence, or consent; and, in order to exercise and enjoy it, to require him to accomplish an impossibility. No registry law can be sustained which prescribes qualifications of an elector *additional* to those named in the Constitution, and a registry law can be sustained only, if at all, as providing a reasonable mode or method by which the constitutional qualifications of an elector may be ascertained and determined, or as regulating reasonably the exercise of the constitutional right to vote at an election."

Judge Taylor wrote an elaborate dissenting opinion. He pointed out that the registry law of 1864 (the one now under consideration was enacted in 1879) had been passed upon by the Court in three cases, and in each one held constitutional. "The object of all registry laws," he said, "is to ascertain before the election-day who are the qualified electors in each election district, and to do away with the necessity, as far as possible, of investigating as to the qualifications of electors on the day of election, and to prevent fraudulent voting by giving publicity beforehand to the names of all persons who claim the right to vote at the coming election. The right of the Legislature to require this to be done, and the propriety of doing it, have been approved by this Court in the cases above cited. . . . To my mind it seems very clear that if the Legislature has any power to require a registration of the electors to be made previous to the day of election, and to compel the non-registered elector to give some good reason for his failing to procure himself to be registered before he shall be allowed to vote on the day of election, it has the same power to enforce the registration by depriving the elector of the right to vote unless he becomes registered as required by law. If the Legislature may compel the elector to give a reason for not registering, it may declare what shall be a sufficient reason, and permit only such excuse for not registering as in its discretion it may deem a valid excuse."

The constitutionality of a registration law was affirmed as early as 1832 by the Massachusetts Supreme Court (Capen *vs.* Foster, 12 Pickering's Reports). No person was allowed to vote without being registered, but it seems that the selectmen or assessors were required to be in session immediately before or on the day of election, so as to give every voter an opportunity to know whether his name was on the list, and to put it there if it was omitted.

> Where the Constitution (said Chief-Justice Shaw) has conferred a political right or privilege, and where the Constitution has not particularly designated the manner in which that right is to be exercised, it is clearly within the just and constitutional limits of the legislative power to adopt any reasonable and uniform regulations in regard to the time and mode of exercising that right, which are designed to secure and facilitate the exercise of such right in a prompt, orderly, and decent manner. Such a construction would afford no warrant for such an exercise of legislative power as under the pretense and color of regulating should subvert or injuriously restrain the right itself. . . . The right of any individual person, claiming the privilege of voting, may involve an inquiry into the fact of citizenship, sex, age, domicile within the Commonwealth, town, or district, the payment of taxes, exemption by law from the payment of taxes, and the fact of his being a pauper, or under guardianship or otherwise. All these are questions of fact, open to proof of various kinds, and sometimes, though rarely, requiring considerable research and investigation. Is there anything in the above-recited provision of the Constitution which requires the selectmen to go through this investigation during the progress of the polling, and while many other citizens, whose right is unquestioned, and proved by their names being previously entered on the list, are waiting to give in their ballots and retire? The Constitution, by carefully prescribing the qualifications of voters, necessarily requires that an examination of the claims of persons to vote, on the ground of possessing these qualifications, must at some time be had by those who are to decide on them. The time and labor necessary to complete these investigations must increase in proportion to the increased number of voters; and, indeed, in a still greater ratio in populous commercial and manufacturing towns, in which the inhabitants are frequently changing, and where, of necessity, many of the qualified voters are strangers to the selectmen. If, then, the Constitution has made no provision in regard to the time, place, and manner in which such examination shall be had, and yet such an examination is necessarily incident to the actual enjoyment of the right of voting, it constitutes one of those subjects respecting the mode of exercising the right, in relation to which it is competent to the Legislature to make suitable and reasonable regulations not calculated to defeat or impair the right of voting, but rather to facilitate and secure the exercise of that right. This Court is of opinion that the provisions in the general law regulating elections, and that in the act incorporating the city, which require that the qualifications of voters shall be previously offered and proved, in order to entitle them to vote, that their names shall be entered upon an alphabetical register or list of voters, is highly reasonable and useful, calculated to promote peace, order, and celerity in the conduct of elections, and as such to facilitate and secure this most precious right to those who are by the Constitution entitled to enjoy it; that it can not be justly regarded as adding a new qualification to those prescribed by the Constitution, but as a reasonable and convenient regulation of the mode of examining the right of voting which it was competent to the Legislature to make.

The objection was raised that the law made no provision for "the publication of the lists of voters prior to each election, so that it is impossible for a voter to know whether his name is on the list or not, and that without any neglect of his own his right of voting may be defeated." On this point the Court said: "If the provision of this law is such as to afford the voter no opportunity to know seasonably whether his name is on the list or not, and to have it inserted if previously omitted, it would constitute a serious objection to its validity. But we think it is not open to this objection. The law specially required that the lists should be posted up a certain time previous to the election, and that the selectmen or assessors should be in session immediately before or on the day of the election, so as to give to every voter the means of knowing whether his name was borne on the list, and opportunity to place it there if omitted."

In an opinion delivered in 1868 (47 Illinois Reports, 101), the Supreme Court of Illinois said: "There can be no question that the Legislature may provide all reasonable safeguards to preserve the ballot-box from fraud, and to maintain the purity of elections. As the wisdom of our laws, the fair and impartial administration of justice, depends upon the officers chosen by the people, and even the perpetuity of our present form of government can only be maintained by preserving our elections free from fraud and corruption, all reasonable requirements for the purpose, not calculated to abridge the elective franchise, are within the scope of legislative power." The law in force at that time was upheld, though the question as to its constitutionality does not appear to have been much discussed, if, indeed, it was raised. The law prohibited the voting of unregistered voters, but it permitted any elector not registered to vote by proving his constitutional qualifications on election-day. Similar legislation has been sustained in California by the Supreme Court, without discussing the constitutional question. (See opinions rendered by the Court in 1867 and 1868, and reported in 33 California Reports, 55, and 34 id., 273.)

The registration law of Iowa, in force in 1869, prescribed that no person should vote who was not registered prior to election-day. It provided, however, that an unregistered elector might vote on giving a good reason for not being registered. The Constitution of the State was silent as to the power of the Legislature to pass a registry law. The law in question was upheld by the Supreme Court. The opinion may be found in 28 Iowa Reports, 267. Chief-Justice Dillon said: "Those whom the Constitution declares to be electors can not be disfranchised; and not one jot or tittle can lawfully be added to or taken from the qualifications which the Constitution prescribes. But the Legislature, while it must leave the constitutional qualifications intact, and can not add new ones, may, nevertheless, prescribe regulations to determine whether a given person who proposes to vote possesses the required qualifications; and these regulations are valid, provided they do not amount to a denial or invasion of the right conferred by the Constitution. To insure the integrity of the ballot-box, the Legislature has determined that a registry law is expedient. The Legislature is supposed best to know the situation and wants of the State, and whether there is a necessity for laws of a particular character; and when such laws do not invade the constitutional rights of the citizen, this Court can not sit in judgment upon the wisdom of the General Assembly, but must respect, obey, and carry out the legislative will. The act in question professes to be one intended to prevent fraudulent voting; and the Court sees no reason to believe that the professed purpose is not the true purpose. It aims to secure this end by requiring a registry of voters. It provides for notice, and fixes a time and place in which the registry may be made or revised. It gives every voter an opportunity to have his name placed on the register."

The General Statutes of Rhode Island require the election officers to reject the votes of all persons claiming to vote whose names are not on the registry lists. The Constitution provides: "The General Assembly shall have full power to provide for a registry of voters, to prescribe the manner of conducting the elections, the form of certificates, the nature of the evidence to be required in case of a dispute as to the right of any person to vote, and generally to enact all laws necessary to carry this article into effect, and to prevent abuse, corruption, and fraud in voting." In 1881 the Supreme Court of the State gave an opinion (13 Rhode Island Reports, 729) upholding the law requiring the rejection of the ballots of unregistered voters. The Court was of opinion that the statute was "fully authorized" by the constitutional provision cited above.

In 1884 the Kansas registration law was held constitutional by the Supreme Court of that State. The opinion is reported in 31 Kansas Reports, 537. The law required the registration lists to be completed ten days before the election. No person was allowed to vote who was not registered, and there was no opportunity to register during the ten days preceding the election. Any voter might, however, register at any time in the year except during these ten days and election-day. The Constitution of Kansas (Article V, section 4) provides that "the Legislature shall pass such laws as may be necessary for ascertaining, by proper proofs, the citizens who shall be entitled to the right of suffrage hereby established." "It seems to us," the Court said, "that this manifestly contemplates a registration prior to the day of election." "Requiring a party to be registered," the Court continued, "is not in any true sense imposing an additional qualification, any more than requiring a voter to go to a specific place for the purpose of voting, or requiring him to prove by his own oath or the oaths of other parties his right to vote when challenged, or than requiring a naturalized foreigner to present his naturalization papers. Each and all of these are simply matters of proof, steps to be taken in order to ascertain who are and who are not entitled to vote. . . . It is true, isolated instances may occur where a party, through sickness or absence, is unable to register, and so loses his vote; but the same result may follow where any failure to produce the required evidence occurs. . . . It can not be held that when the poll-books are open throughout the entire year, up to within ten days of the election, and in a public office in the city, there is any abuse as to either the time or manner of obtaining a list of legal voters. . . . We think it may be affirmed that under the requirements of our Constitution it is the duty of the Legislature to provide for a registration of voters; that it may provide that such registration be completed prior to the day of election, providing that ample facilities and time for registering are prescribed; and that it may also provide that one not registered shall not be allowed to vote."

The New York registration law of 1872 provided for the regulation of elections in all cities and towns of the State except New York and Brooklyn, for which there was a special law. It required the Board of Registers to meet on Tuesday, three weeks preceding the election, and sit two days, if necessary. The registers were to make up a list of voters from the poll-list of the last election. They were required to meet again on Friday preceding the election for the revision and correction of the lists. Any qualified voter was permitted on that day to have his name put on the registry if not already there. No person was allowed to vote whose name was not on the list completed on Friday. The validity of this law was recognized by the Court of Appeals, the highest court of New York, in 1875, though the power of the Legislature to pass it does not appear to have been a direct issue in the case, which is reported in 62 New York Reports, 186. The Constitution of the State is silent on the subject of registration.

From this review of the judicial authorities on the subject may be deduced the following conclusions: First, that the Legislature has no power to add to or take from the qualifications of a voter prescribed by the Constitution; second, that the Legislature, even when the Constitution is silent on the subject of registration, may pass a registration law that is a reasonable regulation of the right of voting, and gives to every voter a reasonable opportunity to vote. But what is a reasonable law, how far the Legislature may go in regulating the exercise of the right without impairing the right, is a question on which the courts have differed heretofore and are likely to differ hereafter.

Party Qualifications for Office.—In an opinion filed Oct. 14, 1885, the Supreme Court of Michigan held that the Legislature has no power to prescribe party qualifications for office. The new law for the regulation of elections in Detroit provided for the appointment by the Mayor and Common Council of four Registration Commissioners, of whom two were required to be Republicans and two Democrats. The commissioners were authorized to appoint ward registers and inspectors, and these appointments were to be made equally from the two dominant political parties. The Supreme Court declared the law unconstitutional and set it aside. The Court held that the statute sets up a political test for office, which is not only contrary to the theory of a "true republican government," but is in conflict with the plain letter of the State Constitution, which, after prescribing the form of oath to be taken by all public officers, declares, "And no other oath, declaration, or test shall be required as a qualification for any office or public trust." The reasoning of the Court appears in the following passages of the opinion delivered by Judge Campbell:

> It is a most important principle under our constitutional system that no one shall be affected in any of his legal and political rights by reason of his opinions on political subjects or other matters of individual conscience. The political right to freedom of belief and expression is asserted in the most distinct way, and applies to every privilege which the Constitution confers. No one has ever supposed that any new condition could be added to those which the Constitution has imposed on the right of suffrage, beyond such as are necessary to guard against double voting, or to prevent its exercise by those who are not legal voters. The only legitimate object of registration laws is to secure a correct list of actually qualified voters. Any attempt to inquire into the sentiments of the voters is not only an abuse, but one which it is the chief purpose of the ballot system to prevent. The ballot is a constitutional method which can not be changed, and its perpetuation means the security to vote without any inquisition into the voter's opinion of men or measures; and it would be entirely meaningless if the voter's choice of candidates for any office must be made from any particular party or number of parties. But the Constitution has made this more specific (although this was hardly necessary) by providing, after giving the form of an official oath, that "no other oath, declaration, or test shall be required as a qualification for any office or public trust." . . .
>
> It is altogether likely that the framers of the law were of the opinion that the evils of partisan action, and the temptation to carry it to abusive extremes, would be lessened by requiring that one party should not monopolize the offices, but that two should share them. No one can doubt the advantage of impartiality in public action. But parties, however desirable and unavoidable they may be, and however inseparable from popular government, are not and can not be recognized as having any legal authority as such. The law can not regulate or fix their numbers, or compel or encourage adherence to them. Many good citizens form no permanent party ties, and, when elections are close, the effort of each party is to detach votes from the friends of the other. Where there are two parties larger than any other, the success of either is very often gained by coalition with a third one. In local matters party allegiance is not uncommonly laid aside for the time being, so that it can not be said that any party is represented in the election. However well meant such a statute as that before us may be, it distinctly makes party adhesion a condition of office; and not only so, but it puts all but the two favored parties beyond the possibility of representation if the law is obeyed.

The decision was unanimous. A concurring opinion was written by Chief-Justice Morse. "We must take," he said, "judicial knowledge of the current undisputed history of our State and country, and act upon the assumption and the fact that there are, to-day at least, in the State of Michigan and in the city of Detroit, four political parties: to wit, Republican, Democratic, National or Greenback, and Union or Prohibition. To confine the registration and election boards to men composed wholly of any one, two, or three of these parties, would be a plain violation of the spirit of our Constitution, and have a tendency to hamper and abridge the elective rights of those belonging to the political party or parties who, by law, would not, and could not, have any representation on such boards. Such a law is in direct conflict with the plain letter of the Constitution prescribing the form of official oath and prohibiting any other test for office." It is also repugnant to a fundamental principle of our form of government. "There can be in a true republican government no political or religious test in holding office, the political and religious liberty of the citizen being at the foundation of republican institutions."

Statutes authorizing and requiring boards of public officers to be politically divided are common in other States, and the provision of the Michigan Constitution on which the Detroit law was set aside is common in other State Constitutions.

EMMA KALELEONALANI, Queen Dowager of the Hawaiian Islands, born in Honolulu, Jan. 2, 1836; died there, April 25, 1885. She was the daughter of Naea, a chief of high rank, and was brought up in the home of Dr. Rooke, an English physician, who had married her aunt and settled in the Hawaiian Islands. She received a fine English education, and was married, June 19, 1856, to the King, Kamehameha IV, who died Nov. 30, 1863. Their only child died at the age of four. She visited Europe in 1865–'66. She was a person of much amiability and liberality, and founded the Kamehameha Hospital in Honolulu. Her funeral was a great pageant. The body lay in state in her house (the garden front of which is shown in the accompanying illustration), covered with a purple pall, while young girls prostrated them-

QUEEN EMMA.

QUEEN EMMA'S RESIDENCE.

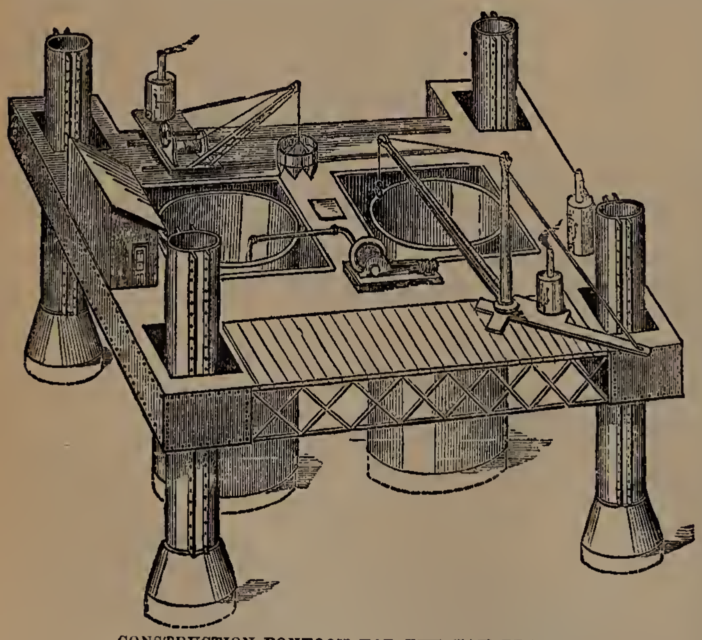
selves on the ground outside and filled the air with their lamentations. In the evening it was placed on a hearse, with plumes made from the priceless feathers of a rare Hawaiian bird, and, in the glare of numerous torches, was drawn to the tomb by members of the Poola Society.

ENGINEERING. The Canadian Pacific Railway.—The first through passenger-train on this northernmost of the transcontinental railway lines left Montreal on November 2, and reached Port Moody, the Pacific terminus, with little delay. Surveys for this route began in 1870, and the Government, after mature deliberation, undertook the construction of the road, and by the end of 1880 had finished 432 miles of track between Winnipeg and Lake Superior, 213 miles up the Frazer river in British Columbia, and sundry other less important sections. In 1881 the company was reorganized, under the name of the Canadian Pacific Railway Company, which assumed control with 710 miles of completed road, $25,000,000 in cash, and 25,000,000 acres of land. It was exempted from taxation or customs duties on construction material, and agreed to have the whole line in running order within ten years. Under the general management of W. C. Van Horne, of Milwaukee, Wis., the work was pushed forward with great energy.

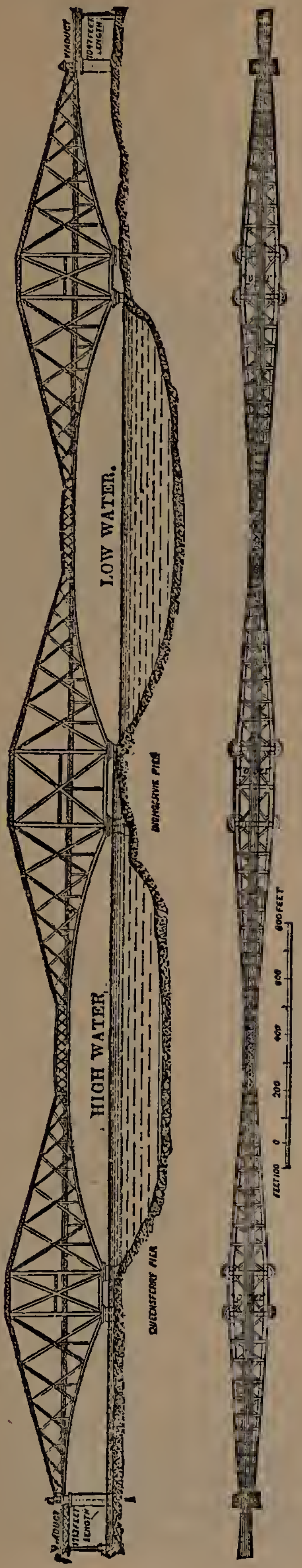
By the end of 1882, 600 miles of track were laid westward from Winnipeg, and in November, 1883, the rails reached the summit of the Rocky mountains. The average daily advance between Winnipeg and the mountains was over 2½ miles, and 3¾ miles was by no means an unusual day's work. The engineering and climatic difficulties that have heen overcome were greater than in the case of any of the more southerly lines, and it may be added that the difficulty of operating the road will be greatly enhanced by the semi-Arctic conditions of a large part of the route. North of Lake Superior the country is broken and rugged, covered with dense forests and intersected by rapid rivers. In May of the present year the various sections were united, and a continuous line of rails 2,500 miles long reached westward from Quebec. Beyond this there remained three formidable ranges, namely, the Rocky mountains, the Selkirks, equally high, and the Gold Range; besides which the Columbia river had to be twice crossed before meeting the Pacific section at the Sushwap Lakes. The work was undertaken by American engineers and contractors, and, although pushed forward with the most astonishing rapidity, was well done in all respects. There are 2,640 ties to each mile, and the construction in general is at least 20 per cent. heavier than would be necessary in a more southern latitude. To accomplish this work in what is described as "a virgin desert," and in the immediate vicinity of well-armed wild tribes of Indians, called for army-like organization. At times there were 40,000 names on the pay-roll, and the question of supplies for men and horses was a vital one. The grading parties were distributed 150 miles, more or less, ahead of the track-layers. For the whole working season a daily average of 15,000 pounds of provisions and 1,700 bushels of oats had to be forwarded, besides all the track-laying supplies, machinery, and equipment. At intervals of fifteen miles, or at every alternate siding station, houses were established with tanks and quarters for the agent, and the contractor who had the construction of these in charge kept up with the track-layers for the whole distance, and as each 100-mile section was finished trains were put on schedule time at twenty miles an hour. The engineering was organized in divisions of thirty miles, and as each was finished the men advanced to the front. Mr. E. T. Abbott, one of the engineers in charge, says that the engineers usually found men sitting on their shovels ahead of the foremost gang, waiting to be set at work. It is highly creditable to the management that in spite of all this dispatch very few accidents occurred involving loss of life, and, barring a few cases of horse-stealing by Indians, no trouble was experienced from this source. Mr. Abbott is responsible for the statement that this feat of rapid construction was accomplished by an apparently reckless but perfectly legitimate expenditure of money, the orders to engineers being to "get there" regardless of cost. The completed line from Quebec to Port Moody is 3,100 miles, besides 1,500 miles of branches, and the work has been finished nearly six years in advance of contract time.

Railways in New South Wales.—Of the several lines in course of construction, that from Sydney to New Castle, a distance of 93 miles, is the most important, since it connects the northern and southern systems, and establishes continuous communication between the British colonies of Queensland and Victoria. When fully finished, the length of rail connecting the northern and southern extremities of the colony will be 866 miles. The section between the two principal cities named involves costly bridge-work over the Hawksbury and Paramatta rivers, as well as over numerous creeks and gullies. That over the Paramatta river carries a double track upon lattice girders, each 478 feet long and 17 feet 6 inches deep. These rest on cast-iron cylinders, 11 feet in diameter below, and 9 feet above the water-line. The cylinders are carried down to depths varying from 70 feet to 126 feet below the girders. There are six spans of 150 feet each in the clear. The total length of the bridge is 956 feet. The Hawksbury river bridge is 2,830 feet long, and of almost identical construction. At last advices these bridges were not completed, owing to delay in receipt of material. The line second in importance is between Blaney and Murrumburah (108 miles). It joins the western and southern systems by a shortened route, which avoids the mountains. Another extension, involving considerable engineering difficulties, is from Sydney to Kiama (73 miles). This was, at last advices, partly finished, but work had been suspended, owing to suspected political jobbery, which called for official investigation. The section of the line already open includes a bridge 956 feet long, similar to that over the Paramatta. Other authorized extensions are from Glen Innes to Grafton (103 miles), crossing two large rivers and requiring numerous cuttings and twelve tunnels through granite; from Glen Innes to Inverell (45 miles), from Tenterfield to the Queensland border (12 miles), from Muselbrook to Cassilis (70 miles), Gundagai to Tumut (33 miles), and numerous other connecting lines. It will be inferred from these data that the local governments have suffered from a railway fever that has involved them in heavy expenditures, and may cause a suspension of the important work in progress. It is noteworthy, however, that a large proportion of the proposed systems is confessedly light and cheap in construction, estimated in some cases as low as $15,500 a mile. Of these "light" lines, that from Forbes to Willcannia (340 miles) is the most important. Altogether the railway system of the colony, present and prospective, as authorized by legislative acts, aggregates something like 3,000 miles, and represents a total outlay up to the present time of not far from $100,000,000, while half as much more for works alone—not including equipment—is to be expended, if the projects are carried out in the immediate future.

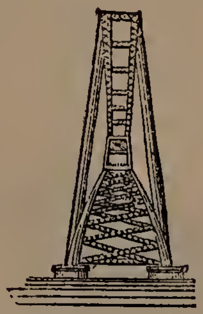
The Tay Viaduct.—During a heavy storm on the night of Dec. 28, 1879, a section of the great bridge over the Firth of Tay, Scotland, was blown down, and, of about 90 persons known to have been on an express train that was crossing at the time, not one escaped alive. In 1881 an act of Parliament authorized a new bridge, and the contracts were given out in April, 1882. The new viaduct, now well advanced toward completion, is parallel to and 60 feet distant from the standing portions of the old bridge, which are utilized so far as possible for purposes of construction. The total length is 3,600 yards, with eighty spans varying from 50 to 230 feet. The height of the rails above high water varies from 25 feet at the northern to 83 feet at the southern end, leaving 79 feet for the four navigable spans in mid-channel. For purposes of classification the work is divided into three sections: (1) the arching at the southern end; (2) the esplanade spans at the northern or Dundee end; (3) the viaduct proper, which extends over tidal water. Of the arches at either end no description is necessary, since they are of ordinary brick and stone construction. The viaduct proper comprises 74 spans of various lengths, consisting of wrought-iron girders resting on piers. The girders are of the usual lattice construction. The piers, which were devised in the light of the terrible experience gained in the destruction of the former bridge, consist of pairs of cylinders connected just above high water, the connection forming the foundation for the superstructure. The method adopted for sinking the cylinders is especially ingenious. It was devised by the Messrs. Arrol, the contractors. A rectangular pontoon is fitted at each corner with a vertical wrought-iron tubular leg, capable of being raised or lowered by hydraulic machinery. When these rest on the bottom, the pontoon or platform can be raised above the water, forming a working stage for sinking and fitting the pier cylinders. In the stage are two openings within which the cylinders are pitched and adjusted in position. The excavation is effected by steam diggers, the cylinders sinking until the desired level is reached. When the cylinders are fixed and filled, the pontoon is raised and floated clear, the rise of the tide being utilized to facilitate the operations. Four of these pontoons are in use in prosecuting the work. At latest advices the arches and esplanade spans have been finished to the roadway level, and the greater part of the parapets are completed. Of the viaduct proper 58 of the pier-cylinders have been sunk. The girders for most of the spans are in position, and all the rest of the girders are ready for placing. The girders and flooring for each of the spans are made on a staging at the south end of the viaduct, and when wanted are floated out into position and raised by hydraulic machinery.


CONSTRUCTION PONTOON FOR THE TAY BRIDGE.

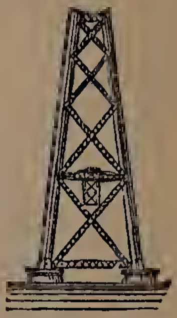
The Forth Bridge.—In the "Annual Cyclopædia" for 1884 a condensed description of this immense work will be found. Herewith are given elevation and plan of the central spans, with cross-sections at centers and at piers, and a cross-section of roadway, showing the four tracks. In brief, the history of this structure is as follows: Twenty years ago the North British Railway Company was authorized by Parliament to construct a bridge five miles above the present one, but a series of borings showed that there was no suitable foundation. In 1873, another act authorized the construction of a suspension bridge at the present location, but the fall of the Tay bridge led to the rejection of the design, and the present plan for a cantilever or continuous girder bridge was adopted. It is the result of consultation between Messrs. Baker, Fowler, Harrison, and Barlow, engineers representing the different railway interests involved. The contract calls for two spans of 1,710 feet each, two of 675 feet each, fifteen of 168 feet each, and five of 25 feet each, aggregating about 1½ mile. The contract price is $8,000,000.



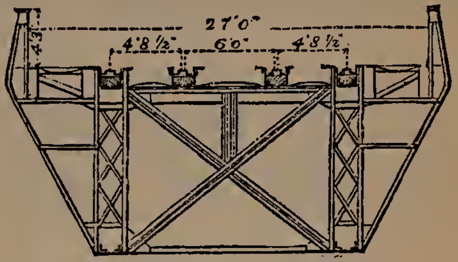
THE FORTH BRIDGE—ELEVATION AND PLAN.



CROSS SECTION AT CENTER.

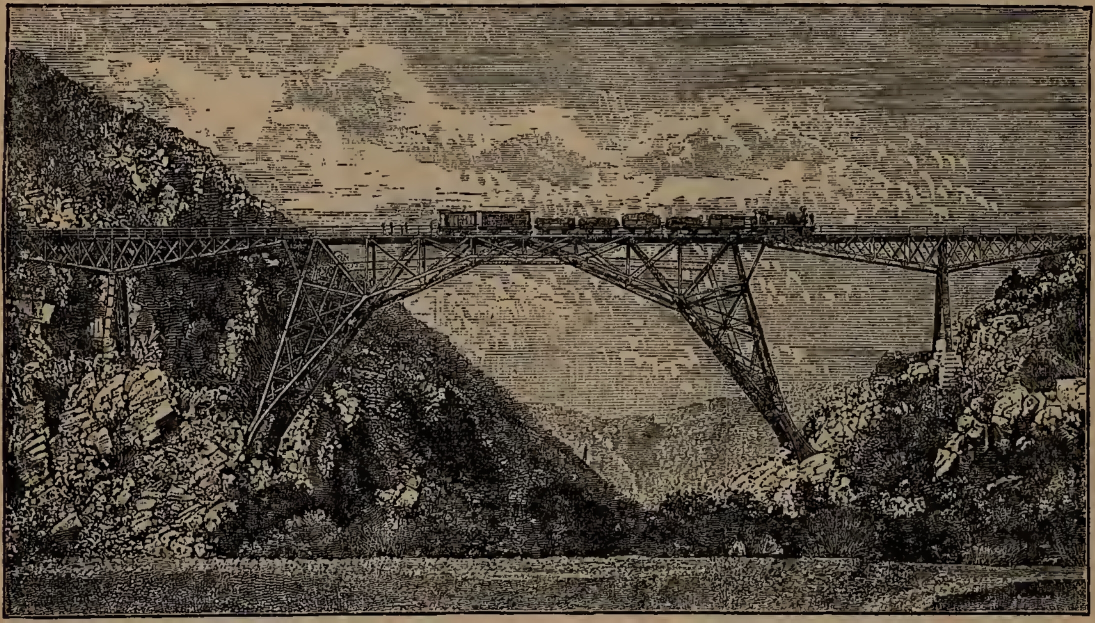


CROSS SECTION AT PIER.

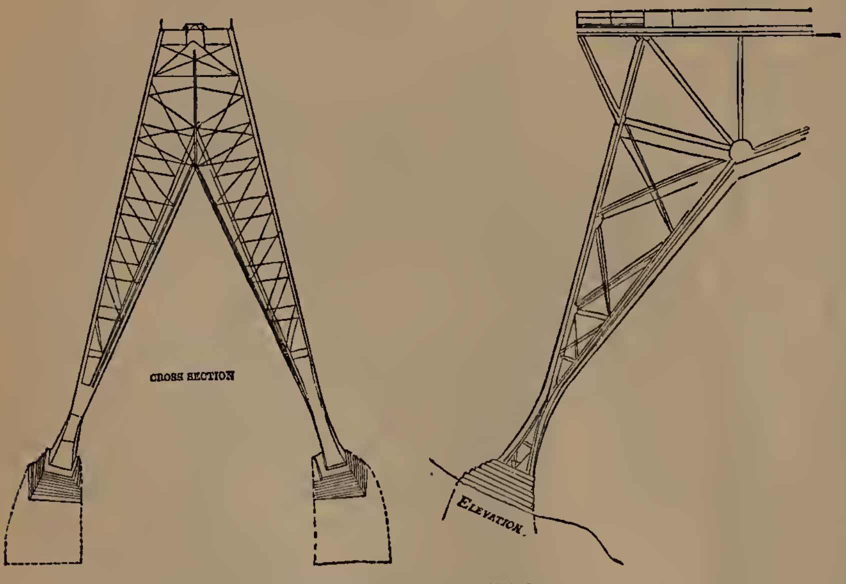


CROSS SECTION OF ROADWAY.

The Blaauw Krantz Bridge, just finished in Cape Colony, Africa, has excited considerable interest among engineers, owing to the originality of its construction and the peculiar conditions that rendered this construction the most available under the circumstances. The designer and engineer is Mr. Max am Ende. This bridge crosses a ravine on the railway from Port Alfred to Graham's Town, at a height of about 200 feet. Its length is 480 feet, and width of roadway 15 feet, the track gauge being 3 feet 6 inches. The central span is an arch of 220 feet and about 90 feet in height, the remaining space on either side being crossed by balanced girders, 144 feet long, resting on iron piers. These girders have one end anchored in the retaining walls, while the other rests in a sliding bearing on the top flange of the main arch. It will be remarked that the dimensions are not extraordinary, but the difficulties were enhanced by the dearth of timber for scaffolding in the vicinity, and the high freights that rendered importation of iron ruinously expensive. Moreover, the single parts of the main span must be easy to lift and as few as possible. All the ordinary forms of truss were carefully considered, and the question finally narrowed itself to a comparison between a central independent girder and the arch device finally adopted. These calculations demonstrated beyond controversy that the proportionate cost of a girder increased more rapidly than that of the arch, as the span was enlarged. In other words, that the economical advantage of the arch increased with the span. The tables as published show that the girder would become impracticable at a point where the arch could still be made without difficulty. In examining the photographs and drawings of this bridge it is impossible to avoid noting the resemblance of the central structure to the skeleton of a gigantic quadruped, with his feet spread apart and planted upon pedestals of masonry built for the purpose in the sides of the ravine. The calculations for economically distributing the strains are most elaborate and ingenious, but their nature precludes the possibility of condensation. They may be found fully illustrated in the "Engineer," vol. lix.



THE BLAAUW KRANTZ BRIDGE.



CROSS SECTION AND ELEVATION.

Bridge at Verona.—In 1882 the ancient stone structure that since the fourteenth century had spanned the river Adige at Verona was destroyed by a flood, and a new structure became necessary. It was essential, in view of liability to sudden floods, that there should be a clear span of 291 feet between abutments, and the ordinary form of arch with the roadway above it was inadmissible, since the water-way would have been seriously obstructed thereby. The bridge, which was completed early in the year, consists of two main arched girders with two vertical sides in lattice-work. These spring from below the level of the roadway at the abutments and rise to a considerable height above it at the center. Vertical supports connect the roadway with the arches. The longitudinal girders are of double trellis. The principal dimensions are: Span between abutments, 291 feet 4 inches; rise of arch, 32 feet 9¾ inches; width of bridge, 37 feet 4¾ inches; depth of arched girders, 4 feet 7 inches. The carriage-road consists of buckled plates resting on transverse girders, and covered with road-metal, while for the sidewalks checkered plates are used. The iron-work on the bridge weighs 400 tons, and cost $42,000, and the total outlay on the structure was $60,000. The bridge was tested by a uniformly distributed load of 82 pounds to the square foot, deflecting under this strain 1·06 inch. The engineer of the work was M. G. B. Biadego, of Genoa.

The Arlberg Tunnel.—This work was finished in May. It forms a link in the Arlberg Railway from Innspruck to Lake Constance, and was undertaken by the Austrian Government to secure more direct communication with Switzerland and western Europe. The road as a whole was one of the most difficult that have ever been built, passing as it does through lofty mountains, with all the usual features of such a route. Snow-sheds had to be built, as on the Central Pacific Railroad, and numerous bridges had to be constructed over ravines of the wildest character. The length and severity of the winters necessitated placing the line always on the sunny slope of the valleys through which it runs. The tunnel was fully described in the "Annual" for 1883. An opening was made in November of that year, considerably in advance of contract time, the contractors receiving a premium of $330 a day. A comparison between the times of construction of the four longest railway-tunnels in the world shows the progress that has been made in methods of construction: Hoosac, 4¾ miles, 22 years under construction; Mont Cenis, 7⅝ miles, 14½ years; St. Gothard, 9¼ miles, 9¼ years; Arlberg, 6⅜ miles, 5 years. The cost, too, has been reduced from $399 a running foot in the case of the Hoosac, to $154 in that of the Arlberg.

The Mersey Railway Tunnel, one of the most gigantic undertakings of its kind in the world, is approaching completion. The whole work was arched in, and the greater part of the land approaches were finished, early in the year. The whole length of the tunnel from quay to quay is 1,300 yards, and the total length of the railway line will be 4½ miles, not including certain contemplated extensions. The termini are the joint stations at Birkenhead of the London and Northwestern and Great Western lines, and the central station at Liverpool. The land portion is mainly under public streets, with frequent stations for the accommodation of passengers. Elaborate hydraulic machinery will be provided for lifting loaded trains, etc., and the contrivances for artificial ventilation are expected to be especially efficient. It is anticipated that the line will be opened in June, 1886.

The Nice Water-Works.—The city of Nice, France, with its 60,000 inhabitants, lies on the shore of the Mediterranean, surrounded by a belt of steep hills, the Maritime Alps, whose slopes, wherever practicable, are made to serve for what we term truck-farming, olive-raising, floriculture, and the like; and the magnitude of the interests involved, taken in connection with the water-supply of the city itself, has been for a long time a serious problem. The natural water-supply, which is excessive during a few weeks, falls off almost to nothing during the rest of the year, and it is only by dint of laborious effort and the strictest economy that the suburban residents have managed to exist. The constant growth of the city and the rapidly increasing number of foreign residents of late years rendered the necessity of a greater supply still more imperative, and in 1878 a company was organized to construct an irrigating canal from the Vesubie, the principal tributary of the river Var, to the valley of the Paillon, which runs through the streets of Nice itself, forming a sometimes dangerous torrent in the rainy season, and remaining nearly dry the rest of the year. The Romans appear to have struggled with a similar problem centuries ago, and the remains of their aqueducts can still be traced along the hill-sides. The state agreed to pay the company a trifling subsidy of about $480,000, and no more under any circumstances. The rest of the responsibility was assumed by the Compagnie Générale des Eaux, with the privilege in perpetuity of charging for the use of its water.

The main canal, recently completed, has a capacity of 141 cubic feet a second, and is subdivided into three branches each, and an overflow to flush the ordinarily dry bed of the Paillon. Besides, two water-mains with a joint capacity of 60,000 metres a day are laid for 9¼ miles along the two banks of the Paillon, and the city is to pay $16,000 a year for the water thus furnished. Water was delivered in the city early in the present year, and the work of completing the irrigating canals and the water-main on the east bank is rapidly progressing. The main canal follows the right bank of the Vesubie for a mile, then crosses to the left bank by a bridge of 46-foot span, crosses six other smaller bridges, and passes through 64 tunnels before it reaches the Saint Blaise siphon, $10\frac{56}{100}$ miles from the opening. This siphon is U-shaped, with the sides inclined and the base flat. It consists of four rows of cast-iron pipes placed parallel to each other. The major horizontal span is 1,480 feet, and the bridge on which the horizontal portion is carried is 164·5 feet long. The total length of the siphon is 1,677 feet; the vertical height is 393 feet 8 inches, equaling a maximum pressure of 12 atmospheres. The internal diameter of the pipes is 31·5 inches, and the total discharge is 3,170,000 gallons an hour. Beyond the siphon the canal continues for 8·7 miles, passing over 14 bridges and through 21 tunnels, aggregating over three miles in length. The most important tunnel is that of Béguds, 3,000 feet long, and changing direction three times. Two branches leave the main canal, one 7·5 miles and the other 4 miles long, both of them passing several bridges and tunnels. Of these the first has a capacity of 28 cubic feet, and the second of 21 cubic feet a second, the remaining 92 cubic feet passing on in what is still regarded as the main canal until it reaches Gairaret, where it ends in a skillfully arranged cascade, the water falling into a large basin, the outlet of which is a third branch, which supplies irrigating canals and large reservoirs along the banks of the Paillon. Every advantage is taken to afford motive-power for machinery, as this branch descends toward the river-level, and the taste of the landscape-gardener has been joined to the skill of the engineer in utilizing every pound of pressure. Frequent cascades and rapids meet the eye. The third branch is to be continued beyond the Paillon, but this work is still in the future. A "high service" is organized by means of turbine-wheels driven without waste of water at certain advantageous points, and by this means water is pumped up to the highest desired levels. The whole work has been done in the most careful and thorough manner. The canals have an average gradient of 1 in 2,000 in the open portions, and 1 in 1,000 in the tunnels and aqueducts, and everywhere precautions have been taken to provide outlets in cases of sudden floods or unexpected pressures. The water now furnished for household purposes in the city of Nice is understood to be of excellent quality, cheap and abundant. The chief engineer of the works was M. Grisel, under whom were, of course, several sectional engineers. Of these, MM. Duplay and Walter (the latter since dead) especially distinguished themselves. The revenues of the company are as yet insignificant, but it is estimated that the income from subscriptions for purposes of irrigation will eventually be such as to afford a fair interest on the investment.

The New Croton Aqueduct.—This aqueduct was fully described in the "Annual Cyclopædia" for 1884, and the details of the work are now being carried out substantially as there given. At this writing, about 25,000 feet of the tunnel are completed, and the work of excavation is progressing at the rate of about one mile a month. The great dam at Quaker Bridge has not yet been definitely determined upon.

Aqueduct at Venice.—Until the sixteenth century Venice depended for drinking-water upon rain-cisterns. Subsequently a canal brought a supply from the Brenta to the nearest mainland, whence the water was transported in boats having a capacity of about 530 gallons. This method was continued until recently, when the city authorities adopted the plans of French engineers, and the Venetian Société de Construction took the work in charge, and began operations early in 1880. The works were completed, and the formal inauguration took place with the opening of a fine fountain in the center of the plaza of St. Mark, on July 23. An aqueduct 16 miles long brings the water to filtering-beds and an immense reservoir, whence it is introduced into the city by means of siphons and subterranean pipes.

The James Watt Dock.—On May 1 the great dock at Greenock, Scotland, was virtually finished, and the water turned on. This forms, in connection with the Garvel Graving Dock and other works, an artificial harbor system probably not surpassed anywhere in the world. The average depth of excavation for the Watt Dock was about 47 feet, the material being mainly sandstone rock and bowlder clay. Some of the sandstone was suitable for the rough ashlar, or "sneckled" rubble of the quay-walls, and the walls themselves were largely hewed out of the solid rock left "in place." In the dock basin 800,000 cubic yards had to be blasted. All the excavated material was used near at hand, part of it on a railway embankment. The major portion was used in the formation of a fine tidal harbor, which will be 4,000 feet long by 700 feet wide, with a depth of 28 feet at mean low water. It was at first proposed to carry the excavated material to the mouth of Loch Long, at an estimated expenditure of $350,000. The harbor construction has cost $100,000, and is worth at least $250,000. In other words, Mr. W. R. Kinipple, the engineer of the Greenock Harbor Trust, has saved the Trust $250,000, and made them a present gratis of a harbor that must prove quite as valuable as the great dock itself. Such is the mission of the conscientious and able engineer. The Watt Dock is 2,000 feet long. The width for half its length is 300 feet. The remaining portion (which is divided by a tongue or jetty 50 feet wide, designed to increase the available mooring area) is 350 feet. The depth of water is 32 feet. There are two entrances from the two adjacent tidal harbors, each 75 feet wide, with a depth of 32 feet on the sill at high water. The surface area of the dock is 14½ acres, and the length of quay nearly 1½ mile. The dock-walls terminate in curved "toes" of brick and concrete, founded 2 to 2½ feet below the bottom of the dock. From the top of these to near low-water mark, sandstone is used. Thence upward to the coping the facing is of finely dressed granite backed with rubble concrete and Portland cement, and finished with massive granite copestones. The retaining caissons are Mr. Kinipple's patent, and were constructed by the Messrs. Kincaid, of Greenock, at a contract price of $135,000. To the top of the caissons lowering or folding bridges are attached, to provide for roadways, etc. Under one of the entrances to the dock is a subway, so that transit is easy from one pier-head to the other when the entrance is open. The caissons, it is said, can be hauled out of the way or replaced in less than five minutes, by a small hydraulic engine provided for the purpose. An extensive system of brick sheds and warehouses affords the needed accommodation on the docks. When fully completed, the works in progress will provide about 88 acres of quayage, and several miles of rails will bring the entire harbor into direct communication with the great Caledonian and Glasgow and Southwestern Railways. The entire cost of the dock-works is placed at $4,550,000.

The Alexandra Dock, at Hull, England, was also completed in May. It is 2.300 feet long by 1,000 feet wide, and contains 46½ surface acres of water, with a depth of 34½ feet. The entrance is bell-mouthed, with a lock 550 feet long and 85 feet wide. The whole area of the dock is 192 acres, of which 152 acres have been reclaimed from the Humber. Two large dry-docks are connected with the main dock. One of these is 500 feet and the other 550 feet long, with a width of 65 feet. One peculiar feature of the dock is that it will be filled with fresh water, thus avoiding the mud deposits, which entail an expense of $50,000 a year upon the other Hull docks. The source of the water is the Holderness drain, a large culvert connecting the dock with this canal.

The Tilbury Docks.—The entrance to these docks, now approaching completion, is opposite Gravesend, on the Thames, below London. This entrance is 100 yards wide, and leads into a tidal basin, where vessels can enter at all stages of the tide. The entrance-lock to the dock proper is 80 feet wide, and consists of a lock with wrought-iron gates. The walls are Portland cement and concrete. In connection are graving-docks with hydraulic pumping machinery. There is to be a large hotel near the river-bank, for the accommodation of passengers by ocean-steamers. The work is carried out under contract for the East and West India Dock Company.

The Davis Island Dam.—On Oct. 8 the Davis Island Dam, six miles below Pittsburg, on the Ohio river, was declared finished. This is designed to maintain the river at a navigable depth the year round, and, if it proves practically successful, will doubtless be the forerunner of many similar structures. The plan is not altogether new, but some of its details are novel. Similar dams exist in Europe, and on the Monongahela and other slack-water rivers in this country. The Davis Island Dam was begun in 1878, and the work has been prosecuted with various interruptions, owing to failure of appropriations and the like. The Government has expended about $1,000,000 on the work. It consists, in effect, of 300 small dams or "wickets," each of which is hinged so that it may lie flat on the river-bed when there is plenty of water, or be raised during the dry season so as to deepen the channel and raise the up-stream level. The line of wickets is 1,223 feet long, extending entirely across the river. Of this, a span of 559 feet is given to the navigable opening, which is available to all craft at ordinary stages of the water. When necessary, however, a lock 110 feet wide and 600 feet long is brought into service, the gates of which are operated by turbines driven by the surplus water. This lock, it is expected, will at all times admit the passage of ordinary river-tows. To fill or empty the lock requires but four minutes. To raise the wickets that close the navigable pass, a "manœuvring-boat" is brought into play, while for the others, or "weir wickets," as they are called, a sectional bridge is used. When the wickets are raised they are held in position by props, and the surplus water escapes through two-inch spaces between the wickets. These spaces, however, can be closed with battens in case of need.

Control of Sand-Dunes.—Some of the most notable achievements of engineering are accomplished through judiciously taking advantage of the forces of nature. A case in point is afforded by the moving sand-dunes of Gascony, France. In the last century these were a perpetual menace to the country bordering the ocean. In their slow but inexorable advance they buried whole villages, and covered fertile fields beyond hope of reclamation. After a long series of experiments, M. Breniontier succeeded in covering the moving dunes. Some 45,000 acres in area were covered with a heavy forest growth. This was successful so far as the then existing dunes were concerned, but new dunes formed along the shore and threatened to become as formidable as their predecessors, which, indeed, they began to encroach upon, in spite of the forest. It was determined, as reported by M. Chambrelent, Inspector of Public Works, to favor the formation near the ocean of a reversed dune, which should, as it were, react upon itself. The principle upon which a sand-dune advances is well known. Its windward slope is gradual; up this the wind drives the sand. The leeward slope is steep; the sand, of course, settling at its natural angle of inclination. This steep slope forms the advancing front of the dune. In order to favor the formation of the reversed dune, a row of palings, with somewhat wide interstices between the boards, was erected about 130 yards from the sea. The sand that passed between the boards flew a short distance before falling, while that which struck the boards fell at the foot of the fence. The result was as had been anticipated, a reversed dune, with a steep slope to windward and a gentle one to leeward. Of course the sand soon reached the top of the fence, but this had been provided for, and the fence was raised by special machinery, and the operation went on until the seaward slope became so steep and high that the sand fell back toward and into the ocean faster than the wind could drive it up the incline. The final height of the reversed dune is thirty to forty feet, according to location. The inland slope is fixed by planting with the *Arundo arenaria*, whose roots penetrate the sand twelve or fifteen feet, and which always keeps its head above the sand. The results obtained, according to M. Chambrelent, are perfectly satisfactory, the movement of the sand having been absolutely arrested in spite of exceptionally severe winds. There are other dangerous sand-dunes in other parts of the world, some of them being in this country, but nowhere else has the problem of dealing with them been successfully solved.

EVANGELICAL ASSOCIATION. The following is a summary of the statistics of the Evangelical Association as they were officially published in September, 1885:

Number of conferences, 26; of itinerant preachers, 1,053; of local preachers, 588; of members, 128,634; of baptisms during the year, 1,888 of adults and 8,717 of children; of Sunday schools, 2,189, with 24,227 officers and teachers and 147,421 pupils; of churches, 1,728, having a probable value of $3,939,799; of parsonages, 540; probable value of the same, $613,700. Amount of contributions for missions, $95,987; for Sunday-school and Tract Union, $2,406; "conference contributions," $6,093. Increase is shown from the previous year of 59 itinerant ministers, 4,080 members, and 6,267 Sunday-school pupils; but the contributions for missions have fallen off $4,395; those for the Sunday-school and Tract Union $88, and the "conference contributions," $340.

The annual meetings of the Missionary Society and the Board of Missions were held in Indianapolis, Ind., Oct. 2. The receipts to the several treasuries of the society for the year had been: To the General Treasury, $16,676; to the "European Treasury," $6,201; to the "Heathen Treasury," $9,635; to conference treasuries, $79,132. Including $390 on account of the standing fund and $2,000 on account of the annuity fund, the total receipts had been $114,042. The expenditures had amounted to $136,642. The permanent fund amounted to $67,681, and the real-estate current fund to $4,950. In the "Home Land," or American missions, the society returned 443 missions, which had been supplied by 435 missionaries, and returned 34,745 members. Six missions had become self-supporting, and 53 new ones had been founded. The number of Sunday schools connected with these missions was 742, with 8,581 officers and teachers, and 42,425 pupils. The foreign mission in Germany and Switzerland returned a small increase of membership. The mission in Japan had been visited by one of the bishops. It returned 7 itinerant preachers (including 3 foreigners), 2 local preachers, 3 churches, 109 members, 2 adults baptized, and 5 Sunday schools, with 16 officers and teachers, and an average attendance of 215 pupils. The management of the mission in Japan was lodged in the hands of a local committee at Tokio, who are to act in concert with the Board of Missions or its Executive Committee, and under their direction. The board declared by resolution that it could not approve "of the establishment of day-schools, in which secular knowledge is principally imparted, and instruction in the principles of Christianity is either a subordinate part of the work, or entirely prohibited." The missionaries were exhorted to qualify themselves to preach to the Japanese in the native tongue. The catechism of the Association has been translated into the Japanese language.

The Woman's Missionary Society held its first annual meeting at Lindsey, O., Sept. 25.

The Board of Publication, at its annual meeting, Oct. 8, returned $467,187 of "net assets," and gross receipts amounting to $200,424. The publication of a biographical work for Sunday schools and for youth was recommended. The publishing house is at Cleveland, O.

EVENTS OF 1885. The most important American event was the transfer of the Federal administration from the Republican to the Democratic party. During the first half of the year the stagnation in business increased, and the accumulation of idle money in the banks continued; but after a recovery in the price of wheat there came renewed confidence in railroads and activity in the iron-trade. European nations sought relief for their depressed agricultural and manufacturing industries by placing additional restrictions on American imports. The diplomatic annals of the year are filled with disputes over the partition of the outlying regions of the earth between the European powers. The cruelly conducted, unofficial war between France and China was ended. A disastrous conflict over the Eastern question in Asia was scarcely averted when the Eastern question in Europe was reopened by the Bulgarian revolution. The nationality principle that now asserted itself afresh to the confusion of statesmen, gained ground also in the Austrian Empire and in Ireland, while in Prussian Poland the iron Chancellor adopted ruthless means to stamp out the embers of Polish national spirit. The following chronicle summarizes the world's history during the year:

January 1. The convention between Russia and Germany on the subject of the extradition of political criminals goes into force.

2. Earth-tremors felt in various parts of the United States. The British flag hoisted in Saint Lucia Bay. Fresh earthquake-shocks in Spain. The vote of censure on the Ministry of Foreign Affairs lost in the Spanish Cortes. Gen. Lewal replaces Gen. Campenon in the French Ministry of War. Dynamite explosion in the Underground Railway in London.

3. The Italian flag hoisted at Beilul, on the Red Sea coast.

5. Congress reassembles. The House refuses to name a day for considering the bankruptcy bill, and rejects the Hiscock proposition to reduce internal revenue duties by $40,000,000; the Mexican War pension bill as amended by the Senate fails to receive a two-third vote. The Federal Supreme Court decides in favor of the steamship companies on the question of immigrant head-money. Gen. Négrier reports a victory over the Chinese at Muidop.

6. The House of Representatives passes the pension appropriation, $59,976,000, and votes an appropriation of $50,000 for the Piegan Indians; the Senate approves the Oregon Central land forfeiture. President-elect Cleveland resigns the office of Governor of New York,

and Lieut.-Gov. Hill is sworn in as his successor. The New York State Legislature begins its sessions. The Portuguese occupy the banks of the Lower Congo. Failure of Tschinkel, Bohemian sugar firm.

7. The Buckner bill to suspend the issue of standard silver dollars tabled in the House. Henry R. Harrison, the Republican candidate, elected Governor of Connecticut by the Legislature, no candidate having received a majority at the polls. Re-establishment of the blockade at Formosa.

8. The Reagan interstate commerce bill passed by the House. Celebration of the coming of age of Prince Edward of Wales. Madame Clovis Hugues acquitted in Paris.

9. Financial crisis in Buenos Ayres. The King of Spain visits the provinces devastated by earthquake. Bismarck explains his colonial policy in the Reichstag.

10. Naval appropriation, $6,120,155, passed by the House. Persecution of Jews in Morocco.

12. The charges against Lieut. Garlington in connection with the Greely Relief Expedition dismissed by the Secretary of War. Treaty concluded between Russia and Prussia for the extradition of political offenders. Disturbances in Cambodia.

13. Hawley resolution in the Senate on the Sherman-Davis letter. Death of Schuyler Colfax. Labor disturbances in South Bend and Fort Wayne, Ind. Opening of the French Chambers. Police Inspector Rumpf murdered by an anarchist in Frankfort. Inundation in Rome.

14. Bill placing Gen. Grant on the retired list passed by the Senate. The French spoliation claims and Chinese indemnity bills passed by the House. John P. Jones re-elected Senator from Nevada. Failure of Oliver Bros. & Phillips, iron manufacturers, in Cleveland. M. Jules Ferry explains the policy of the French Government toward China, and obtains a vote of confidence.

15. Execution of Leroy in San Francisco. Opening of the Prussian Diet.

17. Battle of Abu-klea, near Metemmeh; Col. Fred Burnaby killed. The Panama revolution begins.

19. Final decision of the Supreme Court in the case of the Mormon Clawson. Germany, Austria, and Russia reply to the Egyptian proposals of the English Cabinet. Battle at Gubat, near Metemmeh; Gen. Stewart mortally wounded.

20. William M. Evarts chosen United States Senator in New York, Voorhees in Indiana, Wilkinson Call in Florida, and Z. B. Vance in North Carolina. Anti-Socialist bill introduced in the Austrian Chamber.

21. J. D. Cameron elected to the United States Senate in Pennsylvania, Orville H. Platt in Connecticut, Henry M. Teller in Colorado, George J. Vest in Missouri, and John C. Spoon in Wisconsin.

22. The Lower House of Congress decides that the Oregon Central Railroad land grant is forfeited. The King of Spain returns to Madrid from his visit to the scene of the Andalusian earthquake.

23. A French attack on the Chinese works near Kelung repelled. Minister-President Tisza delivers a speech in the Hungarian Parliament on the religious question. The Danish ministry interpellated on the subject of the neutralization of Denmark.

24. Criminal proceedings entered against Martin and his associates for electoral frauds in Chicago. Sir Charles Wilson embarks on the Nile for the relief of Gen. Gordon. French reverse near Kelung. Attempt to blow up the House of Parliament and the Tower of London with dynamite; explosions in the crypt of Westminster Hall and under the Peers' gallery, wrecking the interior of the western extremity of the House of Commons, and one in the White Tower, injuring 16 persons. The Hungarian Chamber rejects the bill on the subject of Roman Catholic autonomy.

25. Fighting at Kelung. The French senatorial elections. The Derenzis interpellation in the Italian Chamber on the subject of the expedition to the Red Sea.

26. The Bayard resolution in the Senate expressing horror for the dynamite outrages in London. Fall of Khartoum. Effective occupation of Beilul by Italian marines.

27. The House of Representatives refuses to take up the Mexican treaty bill. Federal troops concentrated to prevent trespassers from entering the Indian Territory. End of the contest over the naval appropriations in Congress. Gen. Gordon killed in Khartoum. Signor Mancini declares on the subject of the Assab expedition that Italy feels constrained to follow the impulse given by other great powers in the matter of colonization, and that England would not be jealous of Italy in the Red Sea.

28. Sir Charles Wilson's flotilla arrives in sight of Khartoum. The natives rise against the English at Quittah, on the Gold Coast. The St. Petersburg Government proposes an Afghan boundary-line.

29. The Senate rejects the Nicaraguan treaty. End of the Hocking valley strike. Opening of the Dominion Parliament.

30. The Oklahoma boomers withdraw from the reservation. The Vienna newspapers refuse to print the proceedings of the Reichsrath.

31. Chinese defeat at Kelung.

February 1. Dynamite explosion in Grand street, New York. Extensive public improvements undertaken by the municipality of Madrid in order to furnish work to the unemployed.

2. Yseult Dudley shoots O'Donovan Rossa in front of his office. Fresh Regulator excesses in Kentucky.

4. The Senate adopts the Cullom substitute for the Reagan interstate commerce bill. Carroll D. Wright enters upon his office of Chief of the Bureau of Labor Statistics in Washington. Lynching in Iowa, Texas, and Virginia.

5. Treaty signed between France and the International African Association. French victory at Dongsong, in Tonquin.

6. The consular and diplomatic appropriation bill passes the Senate. Anti-Chinese excesses in Eureka, Cal. The French Government announces the exercise of belligerent rights in the China seas. Grief and dismay in England at the news of the capture of Khartoum by the troops of the Mahdi. The Hungarian Chamber votes the budget for 1885.

7. The occupation of Massowah by Italy. Reinsdorf and Küchler executed for the Niederwald attempt.

8. The news arrives at London that Gen. Gordon was killed at Khartoum. The English Royal Guards ordered to Egypt.

9. Anarchist demonstration in Paris.

10. The pension appropriation bill passes the Senate. Gen. Earle attacks the Arab positions at Kirbekan, near Dulka Island, winning a victory but losing his life. The Chinese repelled at Kelung. Dynamite explosion at Witkovitz, in Moravia.

11. The electoral votes counted in Congress, and Cleveland and Hendricks declared to be elected President and Vice-President. Lord Rosebery enters the British Cabinet. Reconstitution of the Roumanian Cabinet under the presidency of Bratiano. A second expedition leaves Naples for the Red Sea. The Netherlands Government announce that the question of the Luxemburg succession has been settled by the recognition of the right of the Duke of Nassau to the throne.

12. The Senate passes the army appropriation bill. Prince Bismarck's speech in advocacy of a protective duty on cereals. The Chinese routed before Langson.

13. Capture of Langson by the French in Tonquin.

14. A new ministry formed in Roumania.

15. The Spanish ministry receives a vote of confidence from the Chamber of Deputies.

16. The retirement bill for Gen. Grant fails of a two-third vote in the House. The Indian appropriation bill passed by the Senate. The House rejects the liquor-traffic bill. Railroad communications in-

terrupted by snow. The Reichstag approves the grain duties. Anti-German manifestation at the funeral of Jules Vallès in Paris. Gen. Stewart dies of his wounds.

17. The House passes the legislative appropriation bill. The Greek Chamber passes a vote of want of confidence in the ministry.

18. The bill against foreign contract labor passed by the Senate. Proclamation authorizing the mobilization of the English army and militia reserves. The French fleet wins a victory in the China seas.

19. The Senate passes the Texas-Pacific land forfeiture bill.

20. The agricultural appropriation bill passes the Senate. Martin and his companions convicted of election irregularities in Chicago. The Oregon Legislature adjourns without electing a United States Senator. The English Grenadier Guards depart for the Soudan. France declares rice contraband of war.

21. Dedication of the Washington Monument in Washington. United States Marshal Gosling murdered by robbers in Texas. Auditor-General Swaim suspended and placed on half-pay for twelve years by sentence of court-martial. The advance of the Russians in Central Asia reported in the London "Times."

22. Lord Edward Fitzmaurice says in the British House of Commons that the Russian ambassador denied the truth of the rumor that there had been an advance upon Herat.

23. The Post-Office appropriations voted by the Senate, and the naval appropriations by the House. Proclamation of military law in Bechuanaland and arrest of Niekerk. The bill for the reform of the Hungarian House of Lords passed by the Chamber. The French Chamber vote against the surtax on grain. A third Italian expedition departs from Naples for the Red Sea. Upon an understanding with England, Italian forces occupy Assab and Beical.

24. The bill authorizing the President to negotiate for the purchase of Indian rights in the Oklahoma lands approved by the Senate. Yunnanite troops attempt to storm Tuyen Quan.

25. The French commercial treaty with Burmah published.

26. The Berlin Conference signs the general act of the Congo, and dissolves.

27. The sundry civil appropriation bill passed by the House; also the substitute for the river and harbor appropriation bill. Letters patent granted to the German Colonization Association, placing their acquisitions in Africa under the German protectorate. The vote of censure on the Egyptian policy of the British Government rejected by the House of Commons, but adopted in the House of Lords by a vote of 3 to 1. Arrests of Anarchists in Switzerland.

28. The appropriation for fortification voted by the House. The murderers of Capt. Murphy convicted in New Orleans.

March 1. Bombardment of Chinghae by Admiral Courbet. The revolutionary movement in Central America assumes a serious aspect.

2. The Senate increases the New Orleans appropriation to $400,000. The German Chancellor delivers a speech on colonial affairs, explaining the relations with England. The German African Association acquires territory in Zanzibar.

3. The fortification appropriation voted by the Senate. Departure of the New South Wales contingent for the Soudan from Sydney. The French garrison at Tuyen Quan rescued. The occupation of Zulfikar Pass and of Sariyazi by the Russian outposts announced by Lord Granville in the British Parliament; explanations demanded of the Russian Government.

4. The House of Representatives adjourns after passing the Grant retirement by 198 votes to 78. Inauguration of President Cleveland. The Senate of the Forty-ninth Congress meets in extra session. Senator Blair re-elected in New Hampshire. Capt. Couch and twelve other Oklahoma boomers arrested as rebels. Herbert Bismarck in London.

5. The Cabinet appointments announced.

6. The appointments of Secretaries Bayard, Lamar, Garland, Vilas, Manning, Endicott, and Whitney confirmed by the Senate. Fairchild, Assistant-Secretary of the Treasury, and Black, Commissioner of Pensions, nominated by the President. Execution of Dr. Görsen, uxoricide, in Philadelphia. Conciliatory declarations of Lord Granville in the House of Lords in respect to the German colonial policy. The Italian Chamber approves the sale of the state railways.

7. Walthall nominated by the Governor of Mississippi to be Senator in the place of Secretary Lamar. Spanish sovereignty over the Sulu Archipelago formally recognized by Germany and England.

9. Ex-Surg.-Gen. Wales summoned before a court martial to answer to charges of neglect of duty. Gen. Barrios, President of Guatemala, proclaims the union of the states of Central America, and takes the field with his troops to render the union effective.

10. Sir Charles Warren enters Rooi Grond. The proposition to reduce the annual recruit of the Spanish army from 70,000 to 40,000 men rejected by the Cortes.

11. Trial of Gen. Hazen before a court-martial for insubordination. The Governor of Dakota vetoes a bill to establish woman suffrage. The Chinese positions around Kelung taken by the French after five days' fighting. An agreement on West African questions made by Count Herbert Bismarck with the English Government.

12. The President withdraws the Nicaragua Canal and Spanish reciprocity treaties from the Senate, in order that they might be considered by the new Administration. Martin and Gallagher sentenced to be fined and imprisoned for election frauds in Chicago. The British Government demands explanations on the subject of Gen. Komaroff's advance, and at the same time begins to prepare for war.

13. The standing committees of the Senate, for the Forty-ninth Congress, are chosen. Zebehr Pasha arrested in Cairo. The British Government reject the Zulfikar-Maruchak boundary-line. Death of Gen. Fernandez, President of Costa Rica. The British Parliament votes £20,000 to the family of Gen. Gordon. Gladstone's speech, announcing the agreement of Russia not to advance.

14. The Russian Government agrees not to advance on the Afghan frontier unless the Afghans advance.

15. The opponents of the Gould administration of the Wabash Railroad system win their case.

16. Lynch-murders in Arkansas. The revolutionists attack Panama. The German Reichstag votes a subsidy for trans-oceanic steamers.

17. A formal censure recorded against Gen. Hazen by the court-martial. Geo. Gray elected Senator from Delaware in Secretary Bayard's place. The United States intervene with a naval demonstration in the Central American conflict. The cattle-duties bill passed by the French Chamber. The Belgian Chamber resolves to present an address to the King on the happy conclusion of the Berlin Conference and the creation of the Free State of the Congo. The French blockade Pakhoi.

18. The murderer Cluverius arrested in Virginia. The Danish Folkething adopt the address to the King asking the dismissal of the ministers.

19. The President appoints Porter Assistant-Secretary of State; Atkins, from Tennessee, Chief of the Indian Bureau; Montgomery, from Michigan, Chief of the Patent-Office; Durham, from Kentucky, First Comptroller of the Treasury; Hay, from Pennsylvania, First Assistant-Postmaster-General; Pendleton, from Ohio, Minister to Berlin; McLane, from Maryland, Minister to Paris; Phelps, from Vermont, Minister to London; Jackson, from Georgia, Minister to Mexico; Muldrow, from Mississippi, Assistant-Secretary of the Interior; Sparks, from Illinois, Land

Commissioner; and McConville, from Ohio, Reviser of Accounts for the Post-Office Department. Conventions with Mexico, providing for the regulation of the boundary, and prolonging the term for ratifying the treaty of commerce, approved by the Senate. The Austrian Chamber votes the budget.

20. The freedom of worship bill passed to a third reading in the New York State Senate. James A. Berry chosen to succeed Garland as Senator from Arkansas. The Ohio Legislature agrees on a constitutional amendment abolishing the October elections. Secretary Whitney asks for an accounting from John Roach, and orders an investigation of the Navy Department. Gen. Graham advances, expelling the Arabs from their positions at Hasheen.

21. King Christian replies with a rebuke to the address of the Folkething.

22. The British sharply attacked by the Arabs near Suakin.

23. The Edmunds anti-polygamy law declared constitutional by the Supreme Court. The French Chamber passes the bill re-establishing *scrutin de liste*.

24. The sentence against Martin and Gallagher, in Chicago, suspended. The forfeited lands of the Texas Pacific Railroad Company are declared open for settlement. The British zariba near Suakin again assailed. Barrios invades Salvador.

25. The redistricting of Pennsylvania completed by the Legislature. The mounted police attacked by the Winnipeg rebels.

26. The Niagara Park bill in the New York Legislature. Altercation in the Ohio Legislature.

27. The French Senate agree to the surtax on foreign wheat. The British House of Commons approves the Egyptian financial agreement. The British troops retire from Korti. The Riel rebellion begins in Northwest Canada.

28. Costa Rica, Nicaragua, and Salvador form an alliance to resist the President of Guatemala, who crosses the frontier of Salvador with 15,000 men.

29. Anti-Semitic riot in Liptau, Hungary. The Pescadores Islands occupied by the French.

30. Cox appointed Minister to Turkey, and Pearson Postmaster of New York city. The news of the French evacuation of Langson and the wounding of Gen. Negrier reaches Paris. Encounter at Penjdeh between the troops of Gen. Komaroff and the Afghans, who abandon their camp and evacuate the district. In consequence of the check at Langson the Ferry ministry resigns.

31. The American ship Colon seized, and Aspinwall set on fire, by the revolutionists of Panama. An ancient Roman street discovered near the Forum.

April 1. The Republicans win the State election in Rhode Island. Aspinwall burned by the insurgents. Celebration of the seventieth anniversary of Prince Bismarck's birth, and the fiftieth of his entrance into official life; he is presented with the estate of Schönhausen and 1,200,000 marks as a popular testimonial. The session of the Danish Parliament closed by royal decree, and a provisional financial law promulgated. The Chinese Government offers to make peace with France.

2. American troops and marines sent to Aspinwall to protect the freedom of communications between Panama and Colon. Close of the extraordinary session of the Senate. The freedom of worship bill carried in the New York State Senate. The House rejects the convict-labor bill. Death of Lord Cairnes.

3. Gen. Graham's force occupies Tamai Springs. Preliminaries of peace between France and China signed at Paris. Several German officers arrested for treason.

4. President Barrios is defeated and killed at Chalchuaga. Visit in Vienna of the King and Queen of Sweden.

6. Victory of the Fusionists in the Michigan elections. Republican success in Cincinnati. Municipal elections in Chicago. A French ministry formed under the presidency of M. Brisson.

7. A commission appointed to examine the dispatch-boat Dolphin.

8. The Indians attack Fort Pitt, on the North Saskatchewan, and are repelled by the garrison, which subsequently withdraws and escapes to Battleford. Floquet elected President of the French Chamber. The French Chambers adjourn, after voting a credit of 150,000,000 for Tonquin. The Viceroy of India holds a grand *durbar* with the Ameer of Afghanistan at Rawul Pindi. Mobilization and massing of Indian troops on the Afghan frontier. The "Bosphore Egyptien" suppressed.

9. Bank failure in Norfolk, Va. The "Shenandoah" lands 150 men at Panama. The Indians massacre the whites at Frog Lake, in Winnipeg. The news of the encounter at Penjdeh gives rise to fears in England and throughout Europe of an Anglo-Russian war.

10. Secretary Bayard refuses to interfere in behalf of Irish-American dynamiters in London. The preliminaries of peace between France and China ratified by the French Government.

14. Discovery of the Preller murder in St. Louis.

15. Final passage of the Niagara Park bill in the New York Assembly. The Prince of Wales visits Ireland. Gen. de Courcy appointed commander-in-chief of the French forces in Annam.

16. The Central American Republics conclude a peace.

17. President Arthur's order in relation to throwing the Winnebago reservation open to settlement revoked.

18. Lynching in Missouri. Reappearance of the cholera in Spain.

19. Death of Constantine Rosetti, Roumanian statesman.

20. The Federal Supreme Court decides in favor of the State creditors in the matter of the Virginia bonds and coupons. The grand jury in Chicago takes action in the matter of corrupt practices in the city elections. Death of Gustav Nachtigal, German explorer and special commissioner in Africa. The Reichstag approves the cattle duties. Turkey declares her neutrality.

21. The King of the Belgians announces his intention to assume the title of Sovereign of the Congo State. The British ministry ask for a credit of £11,000,000 for mobilization. The English reserves called out.

22. United States Treasurer Wyman resigns and is succeeded by C. R. Jordan. Prominent Mormons arrested for polygamy in Utah. Cyclone in Texas. Prorogation of the Austrian Reichsrath. Newspapers in Vienna confiscated for publishing the Liberal manifesto.

23. Explosion in the Admiralty offices in London. Anglo-French dispute over the suppression of the "Bosphore."

24. The French Government breaks off official relations with the Egyptian ministry. Gen. Middleton has a disastrous encounter with the rebels at Fish creek, on the banks of the Saskatchewan. American marines occupy Panama. Col. Otter relieves the garrison of Battleford, besieged by Cree Indians.

25. An epidemic of typhoid fever breaks out in Plymouth, Pa. Death of Queen Emma of the Sandwich Islands.

26. Further archæological discoveries on the Palatine Hill. The American troops withdraw from the town of Panama.

27. Dickson, foreman of the jury in the first Star Route trial, acquitted of the charges raised against him. Irish bishops received by the Pope.

29. Gov. Hill, of New York, vetoes the census bill. Energetic measures taken against the cattle-plague in the West.

30. Keiley, from Virginia, after the refusal of the

Italian Government to receive him, is appointed Minister to Vienna. Aizpuru surrenders unconditionally to the Government troops in Panama.

May 1. Four constables shot by cattle-thieves in the Indian Territory. The Peruvian Government troops defeated by Caceres at Ayacucho. The Irish bishops and the cardinals confer in Rome. Earthquake-shocks in Austria.

2. The Mormons address a petition and complaint to the President. Opening of the Hungarian National Exposition at Buda-Pesth. A new ministry formed in Greece. The International Exhibition at Antwerp opened. Eruption of Vesuvius.

3. A treaty concluded at Bogota between the Government of the United States and the Colombian Government for tho joint preservation of order on the Isthmus. Riel and his half-breeds beaten by Gen. Middleton at Battleford. The decree for the suppression of the "Bosphore" rescinded, and an apology made to France by the Egyptian Government.

4. Decision of the Supreme Court against repudiation in Tennessee and Virginia. Reunion of Union and Confederate veterans on the Gettysburg battlefield. A labor disturbance suppressed by the militia in Leman, Ill.; several strikers killed. A new Anglo-Russian agreement announced. Col. Otter's flying column attacks Poundmaker's Indians in Manitoba. Gen. Lumsden recalled.

5. The Oklahoma boomers retire. A ruffian in Colorado shot, after killing seven persons. Delaforge, of the Extreme Left, chosen Vice-President of the French Chamber.

6. A forest protection bill passed in the New York Legislature. Postmaster Palmer, in Chicago, removed.

7. The printing of one and two dollar greenbacks is stopped. An assault of the Colombian rebels on Cartagena repelled. Death of Charles Rogier, Belgian ex-minister.

8. After a long debate in the Chamber, the Italian Government receive a vote of confidence in regard to their colonial policy.

9. Conviction of Mormons in Utah. Gen. Middleton attacks Riel's headquarters at Batoche. Closure of the Prussian Landtag.

10. The Italian minister, Mancini, offers his resignation.

11. The British Parliament votes the war credit. The English Government announces the abandonment of the intended advance into the Soudan, and the withdrawal of the expeditionary force to Assouan and Wady Halfa. Gen. Middleton renews the attack on Batoche and routs the half-breeds.

12. Commissioner of Agriculture Colman charges his predecessor with mismanagement. The redistribution bill passes the House of Commons.

13. The President receives a deputation of Mormons.

14. Postmaster-General Vilas issues a circular to members of Congress in relation to "offensive partisans" in the post-offices. Louis Riel surrenders himself.

15. End of the regular session of the New York Legislature, and calling of an extraordinary session by Gov. Hill. Cyclones and water-spouts in Nebraska and Kansas. Embarkation of the British troops at Suakin ordered. Reconstitution of the Servian ministry. Tho German Reichstag adjourns after passing the tariff bills.

16. Bankruptcy of Major Burke, Director-General of the New Orleans Exhibition.

17. A band of Apaches go upon tho war-path in New Mexico; depredations are committed in Arizona also by Indians. President Zaldivar, of San Salvador, resigns.

18. The decision in the Ford murder-trial confirmed by the Supreme Court of Louisiana. The last section of the Canadian Pacific Railroad completed. The evacuation of Suakin begun. Rupture of the Anglo-Spanish commercial treaty negotiations. Cunningham and Burton, the London dynamiters, condemned to imprisonment for life.

19. Gen. Logan chosen United States Senator in Illinois after a long contest. The siege of Cartagena raised by Colombian troops. Visit in Vienna of the King of Servia.

20. Death of ex-Secretary Frelinghuysen. The Hungarian Parliament closes its session. Germany, France, Austria, and Russia protest against the taxation of Egyptian coupons.

21. The evacuation of Dongola by the British begun. The German New Guinea Association chartered.

22. The New York Legislature adjourns after enacting a census bill. Skirmish with Indian marauders in tho Mogallon mountains. Death of Victor Hugo.

23. Lord Rosebery in Berlin.

24. Conflict between Paris Socialists and police in Père Lachaise cemetery.

25. Fight between United States troops and Geronimo's Indians on the Blue river in Arizona. Secretary Whitney orders an investigation of the Mare Island navy-yard. In accordance with a judgment of the Federal Court in Richmond, the Virginia treasury officials are compelled to honor the coupons of State bonds.

26. Surrender of Poundmaker. The King and Queen of Roumania in Vienna.

27. Severe tornado in Waco, Texas. Ceremonious inauguration of the canal leading to the port of St. Petersburg. General election in Austria begins. Victory of the Government forces over Caceres at Huancayo. Gen. Strange attacks Big Bear in Manitoba, and is driven back.

28. Lockout of laborers in numerous iron-mills of Pennsylvania, Ohio, and other States.

29. Bank failure in Philadelphia.

30. The Russian Government adopts a conciliatory attitude on the question of Zulfikar Pass, thus dispelling the fears of a war. Close of the World's Fair in New Orleans.

31. Destructive earthquake at Serinagur in Cashmere.

June 1. Funeral of Victor Hugo in Paris. Anti-Semitic election riots in Vienna.

2. A riot of striking Italian and Hungarian laborers occurs at Pottsville, Pa. Death of Prince Carl Anton of Hohenzollern.

3. Terrible cyclone at Aden, destroying the German war-ship "Augusta" and many other vessels.

4. The cholera appears in Valencia. The Swiss authorities expel twenty-one Anarchists.

5. John Aufdemorte, an employé in the New Orleans sub-treasury, embezzles $13,000, and flees to Mexico.

6. Sir Peter Lumsden's return to London. Cholera breaks out in the province of Valencia and neighboring districts.

8. Cyclone in Dubuque, Iowa. Small-pox epidemic in Montreal; sanitary precautions taken by the New York Board of Health. The bill to establish *scrutin de liste* passes the French Chamber. The British ministry defeated in the vote on the beer and spirit duties.

9. United States Marshal Lot Wright removed. Signature of the Franco-Chinese treaty of peace.

10. Mr. Gladstone announces in the Commons the intention of the ministry to hand in their resignations. The Suez Canal blockaded by the sinking of a bagger.

11. Foraker nominated for the governorship by the Republicans of Ohio. Cholera breaks out in Madrid.

12. Land Commissioner Sparks recommends the abrogation of the Maxwell land grant in New Mexico. The postal subsidy for the trans-oceanic mail service rendered non-effective by the decision of the Executive. Disturbance in Springvale, Maine, caused by the enforcement of prohibition. The Queen accepts the resignation of the British Cabinet, and calls on tho Marquis of Salisbury to form a new ministry.

13. End of the Austrian elections.

14. Storms and whirlwinds in the Northwest. End of the Suez Canal Conference in Paris, and of the Sanitary Conference in Rome. The earthquakes in Cashmere continue, causing thousands of deaths.

15. End of the lock-out in the iron-works of the Pittsburg district. The cholera spreads in Spain. Death of Prince Frederick Charles of Prussia, and of Admiral Courbet.

16. The Legislature of Rhode Island re-elects Blair to the United States Senate. Lynching outrage in the Indian Territory. Gen. Grant taken to Mount McGregor. The Pittsburg iron strike ends in a compromise.

17. Judge Stallo nominated Minister to Italy by President Cleveland. A renewed discussion in the Italian Chamber on the colonial policy of the Government results in a majority for the ministry of only three votes; the ministers proffer their resignations. Labor disturbance in Brünn, Austria. Death of Field-marshal Manteuffel, Stadtholder of Alsace-Lorraine.

18. Sec. Whitney asks of the Attorney-General an opinion on the legality of rejecting the Dolphin.

19. A claim raised for the payment of $20,000 to the Government by the late Agricultural Commissioner Loring. Arrival of the Bartholdi statue of Liberty in New York. King Alfonso insists upon visiting the cholera districts, but is restrained by the threat of the ministers to resign.

21. Tornadoes in the West and South. Lynching of five men in Texas. Death of Mamiani, Italian statesman.

22. Death of El Mahdi.

23. The Marquis of Salisbury accepts office in England and forms a Conservative Cabinet.

24. E. L. Hedden appointed Collector, H. S. Beattie Surveyor, and S. W. Burt Naval Officer in the New York Custom-House.

25. An agreement come to between the United States and the Canadian Governments in regard to provisionally prolonging the fishery treaty. Sir Nathaniel Rothschild created a peer, the first Jew in the House of Lords.

26. Sanguinary encounter between Mexican troops and Indians on the Arizona frontier. News of the death of Olivier Pain in the Soudan confirmed.

27. Director of the Mint Burchard suspended from office; Jones T. Kimball appointed his successor.

29. A disturbance made by Poles in Toledo. Lynching of twelve men in the Indian Territory. The Roumanian legislature imposes a 50 per cent. surtax on the products of France and other countries not protected by treaty.

30. The Italian ministerial crisis ends in the retirement of Mancini, Depretis taking the portfolio of Foreign Affairs provisionally.

July 1. The President makes important appointments. Secretary Manning declares for civil-service reform. Mackin condemned to five years' imprisonment for electoral frauds. Strike of street-car drivers in Chicago. The shoemaker, Lieske, is condemned to death for the murder of Police Councilor Rumpf in Frankfort.

2. The Central and South American commission's report on commercial relations with Chili and Peru is published. King Alfonso visits the cholera sufferers in Aranjuez *incognito*.

3. Malcolm Hay, First Assistant-Postmaster-General, resigns, and is replaced by A. E. Stevenson. Civil war breaks out again in Peru.

4. The New York Schützencorps are received in grand style at Bingen-on-the-Rhine.

6. Secretary Lamar is requested to expel the cattle kings from the Indian Territory. Lord Salisbury declares his policy. The cholera breaks out in Toulon and Marseilles.

7. End of the car-drivers' strike in Chicago. The "Pall Mall Gazette" begins to publish its disclosures of immorality.

8. An agricultural convention is held in Washington. The trial of the case of Paymaster-General Smith begins in Washington. State Convention of the Pennsylvania Republicans.

10. The French Chamber votes an appropriation for the education of every seventh child in poor families.

11. The negotiations for a commercial treaty with Spain are broken off.

12. Attorney-General Garland delivers his opinion to the effect that the "Dolphin" should not be accepted by the Government. Attempt to kill the Emperor Wilhelm at Ems.

13. Important decision of the Commissioner of Lands regarding grants to railroad companies. Labor strikes in East Saginaw and Bay City, Mich., Pittsburg, Pa., Meriden, Conn., and other places.

14. Labor disturbance in Cleveland. Labor troubles at Trebitsch, in Moravia. Failure of the Munster Bank in Dublin.

15. Republican State Convention in Virginia. The Niagara Park opened with public ceremonies.

17. Ovation to American Turners in Dresden.

19. A Kentucky feud ends in a triple murder.

20. Opening of the Monetary Conference in Paris.

21. Kaiser Wilhelm arrives at Gastein.

22. Lynching outrage in Louisiana. Disturbance at the funeral of the Socialist Hiller at Frankfort-on-the-Main.

23. Death of Gen. Grant. Proclamation of the President requiring the cattle-men to vacate the Cheyenne and Arapahoe reservations. Marriage of the Princess Beatrice of England to Prince Henry of Battenberg.

24. Prof. Hilgard, of the Coast Survey, is removed. Failure of the brokers, Babcock & Andrews, of Syracuse, N. Y.

27. A deputation of cattle-owners waits upon President Cleveland. Charges of gross violation of the civil-service law brought against Postmaster Jones, of Indianapolis, are investigated.

28. The twelve months' strike of the coal-miners of Mount Carmel, Pa., comes to an end. Death of Sir Moses Montefiore.

31. Philip S. Wales, late Surgeon-General of the Navy, is suspended for five years, with half pay, for gross neglect of duty, by a court-martial. The Pacific Mail and other steamship companies refuse to renew their mail contracts.

August 1. The Secretary of the Navy appoints a commission to investigate the business methods of the department.

3. Storm and cloud-burst in Philadelphia. A threatening article against France in the official "North German Gazette."

5. The Civil-Service Reform Association commends the official course of the President. The complaints against the Indianapolis postmaster are dismissed as without foundation. The Paris Monetary Conference adjourns to the 1st of October.

6. Meeting of the Emperors Wilhelm and Franz Josef.

7. The Government undertakes to complete the vessels begun on the Roach contracts. Minister Keiley's appointment is canceled after the definite official refusal of the Vienna Government to receive him. The Secretary of War issues an order for officers on special detail to rejoin their corps. The President goes on vacation.

10. The liberation of the American citizen Santos, in Ecuador, is officially announced in the State Department. The Oklahoma trespassers break up their camp near Caldwell, Kansas, and disperse. Opening of the International Telegraph Congress in Berlin. Admiral Paschen forces the Sultan of Zanzibar to give in by means of an ultimatum.

12. Count Kalnoky visits Prince Bismarck at Varzin.

13. End of the strike in the Saginaw valley. Excitement in Spain at the reported annexation of the Caroline Islands by Germany.

14. Claims of the Northern Pacific Railroad Com-

pany to lands in Washington Territory are denied. Prorogation of the British Parliament.

15. An order of the Commissioner of Internal Revenue gives effect to the decision shortening the bonded period for whisky. The Executive Committee of the Irish National League meets in Chicago. Count Schönborn installed as Prince-Archbishop of Prague.

16. The murderer Maxwell is brought back to St. Louis. Warlike intimations dropped by French ministers at the unveiling of a statue to Gen. Chanzy at Le Mans.

17. The Texas Land-Office is charged with defrauding the State of $2,000,000.

18. Strike of laborers on the Wabash system of railroads.

19. A canal conference in Utica, N. Y., declares for the improvement of the Erie Canal without aid from the Federal Government.

20. Gov. Hoadly renominated by the Democrats of Ohio.

23. Demonstration in Madrid against Germany. Erroneous arrest of five Englishmen in Frankfort-on-the-Main.

24. Socialistic disturbance in Amsterdam.

25. Death of ex-Gov. Fenton. A colored corporal in the regular army lynched in Dakota. Meeting of the Emperors of Austria and Russia in Kremsier. The Burgomasters of Riga and Revel are removed by the Czar for using the German language. Execution of Gen. Prestan in Panama for the burning of Aspinwall.

26. A murderer lynched in Texas after killing eight people. Czech demonstration against the Germans in Könighoff, Bohemia.

31. The cattle-men begin to remove their herds from the Indian reservations in obedience to the President's proclamation.

September 2. The Chinese in Rock Springs, Wyoming Territory, barbarously ill-treated and forced to flee; United States troops ordered to the spot. The trial of editor Stead, of the "Pall Mall Gazette," and his accomplices is begun in London. The Sultan of Turkey finally agrees to nominate a commissioner to negotiate with Sir Drummond Wolff.

3. The Treasury tries to bring silver dollars into circulation by withholding greenbacks.

4. A convention for promoting the improvement of navigation on the Mississippi meets in St. Paul, Minn.

5. Extensive frauds in the issue of school bonds by township officials come to light in Indiana. Violent anti-German manifestations in Madrid at the intelligence of the occupation of Yap by the Germans.

6. Barbarous lynch-murder in Arkansas.

7. President Cleveland returns to Washington. Opening of a conference for the international protection of literary and artistic property at Bern, in Switzerland.

8. Fresh anti-Chinese outbreaks in Wyoming and Washington Territories.

9. A whirlwind destroys Washington Court-House in Ohio, and severe storms rage on the Great Lakes. The Swiss Federal Council expels five Anarchists.

10. Regulators in South Carolina attempt to suppress miscegenation with violence. The German gunboat "Blitz" runs down and sinks the English steamer "Auckland." The protocol of the Anglo-Russian agreement in the Afghan boundary question is signed.

11. Molly Maguire outrages recur in the Pennsylvania coal districts.

14. Gen. de Courcy sets up a new king in Annam.

16. The elephant Jumbo is run over and killed by a railroad train in St. Thomas, Ontario.

17. The Eastern Roumelian revolution occurs, and the union of the two Bulgarias is proclaimed. Close of the International Telegraph Conference in Berlin. An Austrian captain is condemned to prison for treason. The Emperor Franz Josef makes an excursion into Servia.

18. The Apaches massacre six settlers in New Mexico. The Mormon bishop Sharp pleads guilty to a charge of polygamy, and is let off with a fine. The German Federal Council prolongs for one year the minor state of siege in Berlin. Gladstone's election manifesto appears. Count Taafe strengthens the ministerial majority in the Austrian upper house by the creation of new peers.

19. The prosecution of the perpetrators of outrages upon Chinamen in Wyoming is demanded by the representatives of the Chinese Government.

21. Five Chinamen are murdered in Idaho. Division in the Austrian Constitutional party and formation of a German club.

22. The American Forest Protection Convention meets in Boston. Mobilization of the Servian army. Prince Alexander of Bulgaria makes his entry into Philippopolis. Kriffler, the Vienna swindler, is condemned to prison for seven years.

23. Dorman B. Eaton, President of the Civil-Service Commission, hands in his resignation, which President Cleveland declines to accept before Nov. 1. The Republicans of New York nominate Ira Davenport for Governor. The eleventh annual meeting of the Bankers' Association is held in Chicago. The apology of the Spanish Government for insults to the German flag in the Madrid riots is accepted by Germany.

24. Gov. Hill is nominated for the Democratic gubernatorial candidate in New York.

25. In a fight with the Apaches in Arizona the Federal troops make prisoners of 45 red-skins. The Pope of Rome accepts the *rôle* of mediator between Germany and Spain in the Caroline Islands dispute.

26. Opening of the Austrian and Hungarian parliamentary sessions.

27. Indian outrages in Arizona. End of the strike in Cleveland, Ohio.

28. A political murder in Lynchburg, Va. In North Carolina four colored men are lynched. The great powers come to an agreement in the Eastern Roumelian question at the preliminary conference of the ambassadors in Constantinople. Socialist trial in Chemnitz.

29. Conviction of Mormons in Salt Lake City. New persecutions of Chinese in Washington Territory.

30. A convention of colored men in Virginia abandons the Republican party and praises the Cleveland Administration. Civil-Service Commissioner Gregory sends in his resignation. The President decides that gaugers and weighers come within the civil service rules. The Servian Government contracts a loan with the Austrian Land Bank.

October 2. Secretary Whitney's special commission makes a report on the construction of naval vessels. Death of the Earl of Shaftesbury.

3. King Milan opens the Servian Skuptchina with a warlike speech from the throne. Equivocal declarations of the Hungarian Minister Tisza in reference to the Eastern question.

4. The conference of the powers begins in Constantinople. General election in France; surprising Conservative gains.

5. The Alabama Claims Court opens its final sitting in Washington. Strike of street-car employés in St. Louis. The Danish Rigsdag begins its sessions; the constitutional conflict becomes more acute. The Abyssinian general Razalaula wins a victory over Osman Digna; the latter is killed and Razalaula wounded.

7. The grand jury of Rock Spring fails to find an indictment against the persons accused of the outrages on Chinamen. The President makes a number of appointments in the diplomatic service. The nine Social Democrats on trial in Chemnitz are acquitted. Sensational trial of the artist, Prof. Gräf, in Berlin, results in an acquittal.

8. The street-railroad strike in St. Louis fails, but a striker is shot. Revelations of extravagance in the Mare Island navy-yard.

9. Attorney-General Garland explains his relations to the Pan-Electric Telephone Company; the

legal proceedings against the Bell Telephone Company are stopped.

10. Death of Cardinal McCloskey.

11. Conflict of races in Louisiana. Sir Henry Drummond Wolff comes to an agreement with the Turkish Government in relation to Egypt.

12. A family feud in Pennsylvania leads to three murders.

13. The Republicans are victorious in the Ohio State elections. Flagrant election frauds in Cincinnati.

14. The President removes the Chief-Justice of New Mexico, who made S. A. Dorsey a jury commissioner. The General Government adopts measures to prevent the introduction of the small-pox from Canada. Count Hatzfeld appointed German ambassador to London. The Indian Government sends an ultimatum to King Thebaw of Burmah.

16. The Danish Folkething rejects the budget.

17. The National Prison Reform Association meets in Detroit. The French Republicans win at the secondary elections for the Chamber of Deputies.

19. The Anglo-Turkish convention respecting Egypt is signed.

20. Death of ex-Assistant Postmaster-General Hay. Attack on Count Taafe by the Left, in the Austrian Reichsrath.

21. The Governor of Washington Territory makes a report on the subject of the anti-Chinese movement on the Pacific slope. Attempted assassination of the Danish Premier Estrup by the type-setter Rasmussen. Prince Albert of Prussia chosen Regent of Brunswick.

22. The conference of the Latin Monetary Union resumes its sittings in Paris. Prince Waldemar of Denmark is married, with pompous ceremonies, to the Princess Marie of Orleans, at the castle of Eu.

23. The General Land-Office takes measures against speculators in the public lands. Chinese cigar-makers in San Francisco go on strike.

24. The completion of the unfinished ships is ordered by the Secretary of the Navy. The Secretary of the Interior calls in conference the parties interested in the Bell Telephone suits. The Emperor of Austria's address to the Delegations dwells on the necessity of restoring the *status quo*.

25. The alcohol bill is ratified by the Swiss cantons by a great majority.

26. Civil-Service Commissioner Thoman resigns. French victory over the Black Flags in Tonquin.

27. The President refuses to give any more audiences to office-seekers.

28. Signal-Service officials in Fort Myers are summoned before a court-martial for insubordination.

29. Death of Gen. McClellan. In the elections to the Prussian Landtag the Liberals lose heavily, but the Conservatives do not obtain the expected gains. Attempt on the life of Freycinet by a madman.

30. William E. Smith, of New York, is appointed to the place of Assistant Secretary of the Treasury Coon, who was removed. A suit against the Atlantic and Pacific Railroad Company rescues for settlers 5,000,000 acres of land.

November 1. The Pope issues an Encyclical on the constitution of a Christian state.

3. The result of the State elections in New York is the election of the Democratic Governor Hill and of a large Republican majority in the Legislature. In Virginia the Democratic State ticket is successful and a Democratic majority is secured in the Legislature. Connecticut elects a Republican Legislature. In Massachusetts the Republicans carry the elections and secure a Republican administration and Legislature. The Republicans are victorious also in Pennsylvania, Nebraska, and Iowa.

4. Reorganization of the Civil-Service Commission by the appointment of Edgerton, Trenholm, and Eaton as commissioners. Acquittal of the perpetrators of anti-Chinese outrages in Seattle, Washington Territory. The "Dolphin" dispute is settled by a compromise with John Roach.

5. End of the protracted strike in the Hocking valley. Arrest of a number of dynamite conspirators in St. Louis. The extended conference of ambassadors in Constantinople is opened. Prince Alexander of Bulgaria is cashiered by the Czar as honorary colonel in the Russian army.

6. Baron Conrad is relieved from the post of Austrian Minister of Education, and is succeeded by Dr. Gautsch.

7. A proclamation issued by the President against anti-Chinese excesses on the Pacific coast. Several German-Americans staying on the island of Föhr, near Schleswig, are notified to leave the country. Editor Stead and his accomplices are found guilty of the abduction of the girl Armstrong.

8. A dangerous strike of freight-handlers at Galveston, Texas, is settled by arbitration.

9. The Oregon Legislature meets for an extra session. Prince Hohenlohe, the new Stadtholder of the Imperial Province, enters Strasburg. Gladstone begins his Midlothian campaign. Partial reconstruction of the French Cabinet.

10. The Kansas prohibition law is declared constitutional. Decision in the Könighoff riot case pronounced at Königgrätz.

11. The National Association of Free-traders and Tariff Reformers meets in Chicago. Gladstone makes his first great campaign speech.

12. The grand jury of Seattle, Washington Territory, indict thirteen persons for anti-Chinese disturbances. Federal troops sent again to protect the Indian Territory from the Oklahoma boomers.

13. General Prendergast receives orders to march into Burmah.

14. Servia declares war on Bulgaria and marches into Bulgarian territory. Floquet elected Speaker of the French Chamber of Deputies.

16. Brisson announces his programme in the French Chamber.

17. A progressive declaration of principles is adopted in a synod of rabbis of the Reformed Hebrews. The Anarchist Lieske beheaded. Close of the Austro-Hungarian Delegations. Servian victory at Torn.

18. In Holland a working-man is elected to the States-General for the first time.

19. Regulation of the Australian mail service in accordance with a new arrangement with the Australasian colonies. The term for the ratification of the commercial treaty with Mexico is prolonged until May 20, 1886. After a three days' battle at Slivnitza, the Servians are compelled to retreat. The Balkan Conference declares in favor of sending a Turkish special plenipotentiary to Philippopolis. Opening of the German Reichstag.

21. Parnell issues a manifesto recommending Irish electors to cast their votes for the Conservatives.

22. At the instance of Mormons, United States officials are arested on charges of immorality in Salt Lake City. The conference of the powers in Constantinople agrees upon a protocol demanding the formal restoration of the *status quo ante*.

24. Snow-storms in Pennsylvania and northern New York. In Atlanta, Ga., complete prohibition is adopted. The contest in Cincinnati over the senatorial election is decided in favor of the Republican candidates. The Servians have retired from Bulgarian territory. General Jovanovich commits suicide. The English elections begin with a gain for the Conservatives. General Prendergast advances upon Mandalay.

25. Commissioner of Education Eaton sends in his resignation. King Milan, under pressure from the powers, proposes an armistice. Death of King Alfonso of Spain; Queen Christina proclaimed Regent. Ministerial crisis in France over the Tonquin question.

26. Death of Marshal Serrano.

27. A treaty between the United States and Siam concerning the importation of spirits is ratified. A convention of cattle-breeders in St. Louis demands the sale of the Indian reservations. Prince Alexander enters Servia at the head of his army. The Liberal Sagasta ministry formed in Spain. Eight Indians connected with the Riel rebellion are hanged at Battleford.

28. A monster political trial is begun in Warsaw. Alexander of Bulgaria is compelled by the threats of Austria to accept an armistice. Debate in the German Parliament upon the exclusion of Catholic missionaries from German colonies.

30. King Thebaw surrenders to General Prendergast. Germany takes possession of the Marshall Islands.

December 1. The Caroline Islands Convention is signed. Prince Bismarck delivers a message of the King of Prussia, protesting against the discussion of the expulsion of Poles by the Reichstag.

2. Albert A. Wilson succeeds McMichael in the post of Marshal of the District of Columbia. Republican prohibitionists in Kansas propose to found a separate party. A National Farmers' Convention meets in Indianapolis. An official declaration of the Russian Government commends the Bulgarian conduct of the war. Grabova, in Görtz, is destroyed by an earth-slide. Gen. Iglesias surrenders to the victorious Gen. Caceres, who takes over the government of Peru.

4. The prohibition of the manufacture and sale of artificial butter is declared constitutional in Pennsylvania. An explosion of natural gas in Pittsburg causes serious damage.

5. Launching of the steel-armored "Chicago" at Chester, Pa. Massowa is annexed by Italy.

6. Storms and prairie-fires in the West. Turkey refrains, under pressure from the powers, from dispatching Djevdet Pasha as Governor-General to Eastern Roumelia.

7. The first session of the Forty-ninth Congress is opened; Sherman elected temporary President of the Senate, and Carlisle Speaker of the House. The sending of a battery of United States artillery to Salt Lake City causes a sensation. The truce between Bulgaria and Servia is prolonged to Jan. 13. A revolution breaks out in the Mexican State of Nuevo Leon.

8. President Cleveland lays his annual message before Congress. Death of William H. Vanderbilt. End of the coal-miners' strike in the Monongahela valley, Pennsylvania. Gen. de Courcy is superseded by Gen. Negrier as commander-in-chief in Tonquin.

9. Fight between Federal troops and Indians in New Mexico.

10. Numerous cases of trichinosis in Pennsylvania. Disturbances in the Pennsylvania coal-regions. The German Bundesrath approves the project of a North Sea Canal. The elections in Great Britain give Conservatives and Parnellites together a slight majority over the Liberals.

12. Decision of the Supreme Court of Ohio in favor of the Democratic candidates for the Legislature in the Cincinnati contested election cases.

14. The United States Supreme Court makes a ruling defining polygamy in the Mormon question. The appointment of a commission to fix the boundary between Servia and Bulgaria is decided upon. The Hungarian Lower House decides in favor of lengthening the legislative period from three to five years.

15. The Virginia Legislature elects John W. Daniel, Democrat, to the United States Senate in Mahone's place. Death of Robert Toombs, of Georgia. Dr. Deucher is chosen President of the Swiss Confederation. Conflict between the French ministry and the clergy.

16. A dynamite conspiracy is discovered in San Francisco.

17. The Atlanta prohibition law is judicially declared to be valid. The Caroline Islands Convention is formally signed in Rome. Excitement in England over Gladstone's conversion to home rule. Sinking of the Pont Neuf in Paris.

18. Congress votes a pension of $5,000 a year to the widow of Gen. Grant. The House of Representatives adopts the order of business elaborated by Morrison.

19. Failure of the City Bank in Houston, Texas. A squadron of cavalry defeated by Indians in New Mexico. Archbishop Krementz makes his entry into Cologne.

20. The Duke of Seville arrested for dishonorable expressions against the Queen-Regent of Spain.

21. Congress adjourns for the holidays until Jan. 5, 1886. The monster trial in Warsaw ends with the conviction of the accused.

22. Peace concluded between France and Madagascar.

23. The cholera appears in the province of Venice.

24. The French Chamber votes the Tonquin credit by a majority of 274 to 270; Brisson tenders his resignation. Failure of the Austro-Hungarian tariff conference.

26. A quarrel in a Polish Roman Catholic church in Detroit leads to a riot. John Bigelow declines the appointment of United States sub-Treasurer in New York. Triumphant entry of Prince Alexander into his capital.

28. The mine-owners of the Monongahela valley refuse to submit their dispute with the miners to arbitration. Grévy re-elected President of France.

29. The President makes important changes in the civil-service rules in accordance with recommendations of the Civil-Service Commissioners. The Treasury calls in $10,000,000 of bonds. The creditors of the King of Bavaria threaten to levy on the Royal Palace.

30. The Mormon saint, Brigham Young Hampton, is condemned to a year's imprisonment for offenses against morality. English victory over the Arabs at Kosheh.

31. Judge Yates, of Peoria, Ill., flees to Canada on account of the embezzlement of trust funds. Freycinet intrusted with the formation of a ministry. Great Britain announces the annexation of Burmah.

See Disasters of 1885.

EXPLOSIVES. Substances either solid, as gunpowder or nitrogen iodide; liquid, as nitro-glycerin or nitrogen chloride; or gaseous, as electrolytic gas, that by any disturbing cause, such as heat, agitation, contact, or surface action, can be made to increase largely and rapidly in volume so as to produce a shock, are called explosives. The force developed during this conversion depends upon the material used. Likewise the combustion is progressive, as in gunpowder, or almost instantaneous, as in nitro-glycerin. The two varieties of explosives, called respectively "disintegrating" compounds and "shattering" compounds, can not be separated by any sharp line of division; a great variety of explosives, slightly differing from one another, are included between the limits of each class. "Burning" is the term given to combustions in which the action is progressive. "Detonation" is the name applied to those explosives in which the development is almost instantaneous. Much work, and that very carefully performed, has marked the progress of the theoretical discussion of this subject during the past few years. Eminent specialists in this country, in England, and in France, have devoted years to patient toil for the purpose of shedding light on the true nature of explosions. The theory that seems most in accord with our present knowledge is, that an explosion arises from the transformation of the shock into heat. The shock may be propagated from particle to particle in an explosive, or from one explosive body to another not in direct contact with it. The latter of these processes has given rise to the so-called "synchronous vibratory theory" of Sir Frederick A. Abel, of the Royal Arsenal, Woolwich, England. This authority claims that the originating cause of the detonation of an explosive lies in the synchronism between the vibrations produced by the body that provokes the detonation and those that the first body would produce in detonating, precisely as the string of a violin resounds at a distance in unison with another vibrating cord. P. E. Berthelot, who is President of the Committee on Explosive Substances under the French Government at Paris, has opposed the foregoing theory, and maintains that the transformations of mechanical energy into heat, and the retransformation of this into mechanical energy, are quite sufficient to explain the phenomena. His own words are, that it depends on the production of two orders of waves: one series represents the explosive waves properly so called, developed in the midst of the matter that detonates, and consists of a continually reproduced transformation of the chemical actions into thermal and mechanical actions, which transmits equally the sudden pressure all around the center of the concussion to the adjoining bodies, and, by a singular circumstance, to a new mass of explosive material. This latter theory is in the line of the recent investigations of that branch of chemistry known as "thermo-chemistry."

Gunpowder.—In the manufacture of gunpowder there is but little change. The introduction, here and there, of some mechanical improvement is the only important advance made. The composition of the ordinary service powders of most nations fluctuates about the following numbers:

COUNTRIES.	Saltpeter.	Charcoal.	Sulphur.
United States	75	15	10
England	75	15	10
Sweden	75	15	10
Russia	75	15	10
France	75	12·5	12·5
Prussia	74	16	10
Saxony	74	16	10
Austria	75·5	14·5	10

Dr. H. Debus has recently presented the following theory before the Royal Society of Great Britain: "The combustion of gunpowder consists of two distinct stages: a process of oxidation, which is finished in a very short time, occupying only a very small portion of a second, and causing the explosion, and during which potassium carbonate and sulphate, carbon dioxide, some carbon monoxide, and nitrogen are produced; and a process of reduction, which succeeds the process of oxidation, and requires a comparatively long time for its completion. As the oxygen of potassium nitrate (saltpeter) is not sufficient to oxidize all the carbon to carbon dioxide and all the sulphur to sulphur trioxide, a portion of the carbon and a portion of the sulphur are left free at the end of the process of oxidation. The carbon so left free reduces, during the second stage of the combustion, potassium sulphate, and the free sulphur decomposes potassium carbonate. Hydrogen and marsh-gas, which are formed by the action of heat upon charcoal, likewise reduce potassium sulphate, and some hydrogen combines with sulphur, forming hydrogen sulphide." Abel and others oppose this theory as being based upon unwarranted assumptions. It is too early as yet to consider its acceptance. Among the many substitutes for gunpowder are the following:

Saxifragine is a mixture of charcoal and barium nitrate with a small proportion of potassium nitrate. *Diorexine*—composed of potassium nitrate, 50 parts; sodium nitrate, 25; sulphur, 12; and sawdust from hard wood, 13. *Petralite*—potassium nitrate, 64 parts; impregnated wood or charcoal, 30; crude antimony, 6. *Johnite*—potassium nitrate, 75 parts; sulphur, 10; lignite, 10; sodium picrate, 3: potassium chlorate, 2. *Azotine*—sodium nitrate, 69·04 per cent.; carbon, 15·23; sulphur, 11·43; and petroleum, 4·29. *Carboazotine*—potassium nitrate, 61·04 per cent.; ferrous sulphate, 6·73; soot, 24·65; and sulphur, 13·58. The class of explosives usually considered under the title *Blasting-powders* has been largely superseded by the higher explosives. Certain improvements in the way of electric blasting apparatus have been devised, but their use is limited.

Gun-cotton, discovered by Schönbein in 1846, failed at first to become a commercial success as a valuable explosive on account of its liability to spontaneous explosion, its corroding residua, and its excessively violent and irregular character. Official commissions in France, Germany, England, United States, and Austria, reported adversely as to its value. Von Lenk, of Austria, improved the methods used in its manufacture, but its present importance is due principally to the investigations of Abel. The compressed gun-cotton devised by this chemist finds extensive use for military and naval purposes in many countries.

Glyoxilin, invented by Abel, consists of a gun-cotton pulp mixed with potassium nitrate (saltpeter), converted into porous pellets, which are saturated with nitro-glycerin, and afterward coated with varnish to protect them from dampness. *Atlas dynamite* is similar to glyoxilin in composition. The addition of a small quantity of paraffin renders it water-repellent. The use of other forms of cellulose as absorbents for nitro-glycerin are referred to under dynamite. *Tonite* consists of finely divided or macerated gun-cotton, mixed with about the same weight of barium nitrate, made up into candle-shaped cartridges. Standard tonite consists of 52·5 parts of gun-cotton, and 47·5 parts of barium nitrate; but for special purposes and by request, a part of the latter is sometimes replaced by potassium or sodium nitrate. This explosive, made both in England and the United States, is valuable on account of the safety with which it can be transported. *Potentite*, Liverpool cotton-powder, and potentite cotton-powder, are names given to a nitrated gun-cotton compound manufactured in England. Gun-cotton has lately received increased attention in consideration of its use in the preparation of the gelatine dynamite.

Those substances which contain nitro-glycerin constitute the most important class of the so-called "high explosives."

Nitro-glycerin, or *glonoine*, which is considered to be the most powerful explosive known to man, was discovered in 1847 by Sobrero, and first practically applied by A. Nobel in 1863. It is made by introducing pure glycerin into a mixture of pure concentrated nitric acid and sulphuric acid, cooled to a certain degree of temperature. It is a light-yellow, clear, oily liquid, odorless, has a pleasant, sweet taste, is poisonous when inhaled, swallowed, or introduced into the body through the pores, producing headache and sickness. Its specific gravity is 1·595 to 1·6; it freezes when clear and transparent at about 40° C. When ignited, it quietly burns without refuse, and produces carbon dioxide, water, nitrogen, and hydrogen, all in themselves perfectly harmless. When gradually heated to 180° C., or when acted upon by powerful mechanical forces, by the explosion of certain substances as fulminate of mercury, nitro-glycerin explodes. The gases developed by the explosion occupy 1,250 times the original volume of the explosive, and by the high degree of heat evolved this is again expanded eight times, so that the total expansion equals 10,000 times the original bulk. The liquid nitro-glycerin is by itself very little used for explosive purposes, but serves as a base in the manufacture of the high explosives that are sold under various trade-names, but are known generically as dynamite. According to the census, 3,037,722 pounds of nitro-glycerin, having a value of $1,830,417, were manufactured in this country during 1880.

Dynamite is the name given to those explosives that contain nitro-glycerin in absorption. Dynamite proper was first brought into general use in Europe by Nobel, in 1867. The absorbent used was infusorial earth, otherwise known as diatomaceous silica, silicious marl, tripoli, rotten-stone, and commonly called *Kieselguhr*. In 1868 it was introduced into the United States, and became known as giant powder. The different grades of dynamite now made under Nobel's patents are:

GRADES.	Nitro-glycerin.	Absorbent.
	Per cent.	Per cent.
Dynamite No. 1	75	25
Dynamite No. 2	45	55
Dynamite No. 3	35	65
Dynamite No. 3 B	30	70

The absorbent for No. 1 is pure infusorial earth; a mixture of potassium nitrate, wood-fiber, rosin, soda, and infusorial earth is used for the remaining grades. Dynamite is a pasty, plastic mass, of 1·4 specific gravity, and of a yellowish-red color, unctuous to the touch, and without any odor. It can be exploded by means of a cap or by contact with red-hot metal; or, again, by rapid heating to a high temperature, or by means of a heavy blow or concussion. Brought into contact with a burning match or fuse, it will burn without exploding, similar to damp powder; hence nitro-glycerin compounds do not explode from the application of fire (unless in large quantities), but by the application of force. This force may be produced from some shock, jar, blow, percussion, concussion, or vibration, or from the heat produced from one of these. That is, force in some form is necessary to cause the detonation of this class of explosives, while it is not essential in the case of gunpowder. The improper use of dynamite has led to stringent laws on that subject in England. During the last session of Congress, Senator Edmunds introduced a bill into the Senate to punish all who make, use, or carry dynamite for criminal purposes. The employment of other absorbents, in varying proportions, has led to the introduction of numerous compounds, with special names. The most important of these are:

Dualine, invented by Dittmar, is cellulose, derived from wood-fiber (poplar), nitrated and then saturated with nitro-glycerin. Trauzl gives its composition as—nitro-glycerin, 50 parts; fine sawdust, 30 parts; potassium nitrate, 20 parts. *Sebastin* invented by Fahnehjelm, consists of charcoal produced from a special wood and prepared in such a manner as to be able to absorb and solidify the greatest possible amount of nitro-glycerin. A small quantity of potassium nitrate is added, to increase the rapidity of the explosion. There are two grades:

INGREDIENTS.	No. 1.	No. 2.
	Parts by weight.	Parts by weight.
Nitro-glycerin	78	68
Wood charcoal	14	20
Potassium nitrate	8	12

Atlas Powder, made in the United States, is similar, and has the following composition:

INGREDIENTS.	A	B
	Per cent.	Per cent.
Nitro-glycerin	75	50
Wood-fiber	21	14
Sodium nitrate	2	34
Magnesium carbonate	2	2

Hercules Powder consists of:

INGREDIENTS.	No. 1.	No. 2.
	Per cent.	Per cent.
Nitro-glycerin	77	42
Wood-pulp.	2	11
Sodium nitrate	1	43·5
Magnesium carbonate	20	3·5

The following analyses give the composition of several dynamite powders in which gunpowder is the absorbent:

INGREDIENTS.	Judson powder.	Vulcan powder.	Nept'ne powder.	Miner's Powder Co.'s dynamite.	Brady's dynamite.
	Parts.	Per cent.	Per cent.	Per cent.	Per cent.
Nitro glycerin....	5	32·60	32·66	32·91	33
Sodium nitrate....	64	49·46	45·04	49·88	50
Charcoal (or some form of carbon).	15	9·63	17·44	17·21	10
Sulphur..........	16	8·31	4·86	.....	7
Ash	..	....	0·94	1·18	..

Similar to the foregoing are the giant powder, Jupiter powder, thunderbolt powder, titan powder, rendrock powder, etc. *Colonia powder*, invented by Wasserfuhr, is a modified gunpowder saturated with nitro-glycerin. *Vigorite* invented by Bjorkmann, consists of from 5 to 20 parts of sugar or molasses, 25 to 30 parts of nitric acid, and 50 to 75 parts of sulphuric acid. In this country, a preparation having the following composition—potassium chlorate, 17·50 per cent.; potassium nitrate, 18·75; chalk, 8·75; sawdust, 11·25; and nitro-glycerin, 43·75—has been sold under the same name. *Lithofracteur*, invented by Engel, is composed of nitro-glycerin 55 parts, infusorial earth 21 parts, and 24 parts of carbon, prepared bran, prepared wood-pulp, barium nitrate, sodium bicarbonate, manganese dioxide, and sulphur. Trauzl gives the following as the approximate percentage composition of this material: nitro-glycerin, 52; silicious earth and sand, 30; powdered coal, 12; sodium nitrate, 4; and sulphur, 2. *Mica Powder* invented by Mowbray, consists of finely divided mica-scales (a non-absorbent aluminium silicate) and tri-nitro-glycerin, in the proportion of 475 of the first to 525 of the second. Two grades of this compound were made—No. 1 with 52 per cent. and No. 2 with 40 per cent. of nitro-glycerin. This explosive was largely used in excavating the Hoosac Tunnel. *Pantopolite* is the name given to a German invention. It consists of nitro-glycerin dissolved in naphthalin. Where the absorbent is sponge or other vegetable fiber, the name of porifera nitroleum is given; selenitic powder, when the absorbent is plaster of Paris; and metalline nitroleum, when red lead is used as the absorbent.

Explosive Gelatine, or *gelatine dynamite*, invented by Nobel, consists of from 2 to 7 per cent. gun-cotton dissolved in nitro-glycerin. The nitro-glycerin is first raised to a temperature of about 50° C., and finely divided gun (nitro) cotton is then gradually added, the mixture being continually worked in a macerator, and the temperature maintained at a maximum of 35° C. It is a transparent, elastic, pale-yellowish, gummy substance, having a density of 1·6. It is very insensible to shock, to friction, and to the pressure or action of water. To produce complete explosion in a free state, and to develop the great force corresponding to the chemical composition, a powerful detonator is necessary. It is one of the most powerful explosives in existence for marine purposes, and its manufacture is largely superseding that of dynamite in Europe. At the St. Gothard Tunnel it was found to be from one and a quarter to one and a half times as effective as dynamite. The following table, prepared by Trauzl, shows the composition and relative strength of the different grades of gelatine dynamite:

SUBSTANCE.	Composition.	Relative Strength.
Nitro-glycerin.....	Water free........................	100
Explosive gelatine	Nitro-glycerin, 93 per cent...... Collodion gun-cotton, 7 per cent.	100
Gelatine dynamite No. 1.. .	Nitro-glycerin, 58 per cent...... Collodion gun-cotton, 2 per cent. Saltpeter, 28 per cent........... Cellulose, 12 per cent...........	70
Gelatine dynamite No. 2....	Nitro-glycerin, 38·8 per cent.... Collodion gun-cotton, 1·2 per c't. Saltpeter, 45 per cent........... Cellulose, 15 per cent...........	52
Kieselguhr dynamite No. 1..	Nitro-glycerin, 75 per cent...... Kieselguhr, 25 per cent........	70
Dynamite No. 3.	Nitro-glycerin, 25 per cent...... Saltpeter powder, 75 per cent...	40
Fulminating mercury............	Alone	22

Military Explosive Gelatine, invented by Trauzl, consists of 96 per cent. of explosive gelatine to which 4 per cent. of camphor has been added. This compound is considered safe against the effects of bullets, even at short range. It has been adopted by the Austrian military officials for field-service purposes. Powders made from gelatinized dynamite, according to Abel, will be the powerful explosives of the future. *Forcite*, invented by Lewin, is a modification of the gelatine dynamite, and is made by dissolving unnitrated cellulose (as pure cotton) in nitro-glycerin. Saltpeter is then incorporated with the nitro-glycerin and gelatinized cotton. The proportions of the different ingredients vary according to the grade desired. One of the best compositions is nitro-glycerin 75, gelatinized cotton 7, and saltpeter 18. Dextrine may be substituted for a large proportion of the gelatinized cotton, thus: nitro-glycerin, 70; gelatinized cotton, 1; dextrine, 5; saltpeter, 15; ordinary cellulose, 9. This explosive is less expensive than many of the other compounds of nitro-glycerin, and its properties are almost identical with those of the gelatine dynamite.

Potassium Chlorate Powders.—The peculiar power of potassium chlorate, and its violent oxidizing properties, have given rise to many attempts to employ it in the preparation of substitutes for gunpowder. *White gunpowder*, *Horseley's powder*, and *Ehrhardt's powder*, are well-known compounds of this description. *Oriental Powder*, consisting of potassium chlorate, potassium nitrate, and crude gamboge, has been extensively used for blasting purposes in the oil-regions of Pennsylvania. *Pyronome*, invented by Sandoy, consists of 69 parts of potassium nitrate, 9 of sulphur, 10 of charcoal, 8 of metallic antimony, 5 of potassium chlorate, 4 of rye-flour, and a few centigrammes of potassium chromate. These ingredients are mixed in an equal volume of boiling water, and the mass evaporated down to a paste, dried, and powdered as wanted. Himly has recently patented an explosive which is prepared as follows: Potassium nitrate, potassium chlorate, and hydrocarbon (for which may be taken paraffin, asphaltum, pitch, caoutchouc, gutta-percha, etc.), are mixed together in pulverulent form by passing through sieves or otherwise, and the mixture is then treated with a liquid volatile hydrocarbon, which acts as a solvent to the solid hydrocarbon. A plastic mass is thus produced, which is then formed into cakes or sheets by passing through rollers or otherwise, and is rendered hard by evaporating the liquid solvent used, the sheets or cakes so produced being then converted into grains or pieces of any desired size, in the same manner as ordinary gunpowder. This new compound is only an explosive when confined in a close space. It possesses the same density as gunpowder, and is very hard. It can be made twice as strong as the latter, but the intensity of the explosion can be regulated at will by varying the proportions of the ingredients and the size of the granules. *Rackarock*, invented by S. R. Divine, consists first of a solid, composed mainly of potassium chlorate in fine powder, given a reddish tint by some coloring-matter; and, second, of an oily liquid —dinitro-benzol. These compounds, neither of which is explosive by itself, are combined before use by immersing the solid in the liquid for a few seconds until an increase of about one fifth is effected by absorption. The solid is supplied in the form of loosely packed cartridges of different sizes, put up in bags closed at each end. The combination of the ingredients is brought about by means of an open basket of wire to receive the cartridges, which is suspended from a spring balance and dipped in a galvanized iron pail containing the fluid. A little attention to the time of immersion renders the absorption fairly uniform. The explosive, when prepared in this manner, is a compact red solid, having a specific gravity of about 1·7. It decrepitates with difficulty when hammered on an anvil, but hardly ignites on wood. Ordinary friction seems to have little tendency in causing its explosion. Special interest attaches to this compound on account of its use by the United States authorities in exploding Flood Rock on Oct. 10, 1885. The rackarock used was found to possess 109 per cent. of the strength of No. 1 dynamite. Gen. Abbot says: "Rackarock possesses the merits of high intensity of action, unusual density, absolute safety in handling and storage (components unmixed), and little cost; on the other hand, an exceptionally strong detonating primer is essential to develop its full power." In addition to the foregoing, Divine has patented several other formulas in which the potassium chlorate is finely powdered and mixed with nitro-benzol and sulphur, or with "dead oil" of tar and sulphur, or with "dead oil" of tar, sulphur, and carbon disulphide in varying proportions. Several of these mixtures, that have been tested, gave results varying between 77 to 104 per cent. as compared with dynamite.

Picric-Acid Compounds.—*Diorrexine*, invented by Pancera, consists of picric acid, 1·65 per cent.; charcoal, 7·49; beech sawdust, 10·97; potassium nitrate, 42·78; sodium nitrate, 23·16; sulphur, 13·40. This compound is about 25 per cent. lighter than Austrian blasting-powder, of about equal strength, and nearly one fifth less expensive.

Heracline is a blasting-powder composed of picric acid, potassium nitrate, sodium nitrate, sulphur, and sawdust. Heracline burns comparatively slowly, so that it only tears apart the masses blasted, without hurling them violently about. *Borlinetto's blasting-powder* is composed of 10 parts of picric acid, 10 of sodium nitrate, and 8½ of potassium chromate. This mixture is said not to explode by friction or blows. *Brugière picric powder* consists of equal parts of ammonium picrate and potassium nitrate. *Designolle powder* is composed of equal parts of potassium picrate and potassium nitrate.

Paper Blasting-Powder.—*Dynamogen*, invented by Pétry, similar to Hochstaedter's cartridges and Reichard's rolls, is an explosive paper made as follows: In an enameled pot containing 150 grammes of pure water are dissolved 17 grammes of potassium ferrocyanide; when heated to boiling, 17 grammes of charcoal are added, and the mixture stirred well together. When the compound has cooled somewhat, there are added successively 35 grammes potassium hydroxide, 70 grammes potassium chlorate, and 10 grammes starch triturated in 50 grammes of water. The whole is stirred so as to constitute a very thin paste, which is spread with a brush over ordinary filtering-paper, and the other side is varnished in like manner. After three coats have been laid upon each side the paper is dried. It can be cut without danger and made into cartridges.

Liquid Explosives.—The explosive character of mixtures of strong nitric acid with solid or liquid hydrocarbons, or with other very readily oxidizable liquids, was pointed out by Hermann Sprengel as long ago as 1873. Turpin has recently utilized this fact and invented a liquid explosive which he calls Panclastite. The mixture is made by combining nitrogen tetroxide with combustible substances, such as the hydrocarbons; vegetable, animal, and mineral oils; fats and their derivatives, but preferably with carbon disulphide. The two substances should be kept apart until needed for use, when they are mixed in the proportions considered best for the work at hand. The most sensitive mixture consists of two volumes of carbon disulphide and three of nitrogen tetroxide. It is claimed that this explosive possesses greater power than dynamite. Gruson has utilized this compound by charging explosive shells with the two substances in such a manner that, when fired, the ingredients combine, producing the explosive. The shell is then in a condition to produce powerful destructive effects as soon as time or concussion fuse comes into action in the usual manner. *Hellhoffite*, invented by Hellhoff and Gruson, is a solution of a nitrated organic combination—naphthalin, phenol, benzine, etc.—in nitric acid. This explosive is a liquid, and can not be exploded either by a shock or by an open flame. It acts more powerfully than nitro-glycerin, and is exploded by means of fulminate of mercury.

Literature.—Among the recent works on the subject of explosives may be mentioned "The Modern High Explosives," by Manuel Eissler, 1884; "Explosive Materials, with a Bibliography of Works on Explosives," 1883; "Electricity applied to Explosive Purposes," Sir F. A. Abel, pamphlet; "Chemical Theory of Gunpowder," Dr. H. Debus, pamphlet. Prof. Charles E. Munroe, of Annapolis, Md., has, since 1882, published in the "Proceedings of the United States Naval Institute" a series of "Notes on the Literature of Explosives." These notes are regularly reprinted in pamphlet form, and are the most valuable *résumés* of the subject published in the English language.

F

FARGUS, FREDERICK JOHN, an English author, born in Bristol in 1847; died in Monte Carlo, Italy, April 15, 1885. He was an auctioneer in his native city, and never was heard of as an author till he attained a sudden reputation, in 1884, by a novel entitled "Called Back," which he published under the pen name of "Hugh Conway." It is said that he wrote it in ten weeks, and received $4,000 for it from a Bristol publisher. It was first printed in November, 1883, in a thin 8vo, which sold for sixpence, and seemed to fall dead. The publisher says: "I used to be irritated by the daily cheerfulness of Fargus. Of course, he had no risk in the venture whatever, and could afford to come around to my office and gleefully speculate as to what I then sadly deemed to be gross improbabilities. His faith in the ultimate popularity of 'Called Back' was so remarkably unalterable that I sometimes was tempted to take courage and join him in his wanderings in the air-castles of success. And it was not long before his prophecies were realized. By some good fortune Mr. Comyns Carr had the book placed in his hands as one likely to move his dramatic instincts. It is reported that that gentleman went to sleep in searching for the merits of the story. But that was in the evening. Next morning he made a further essay, and was at length so captivated by its richness of incident that he telegraphed straight away to Fargus (with whom he was intimate) a proposition to collaborate with him in dramatizing it. Almost simultaneously a London paper saw in the book what all the world has discovered in it since. Then the flutter came. On the second day afterward I was deluged with telegrams ordering 'Called Backs.' The early edition was practically unreachable, so I at once resolved to get up the volume in a new form. Naturally, as a provincial house, my productive power was then limited; but by a supreme effort I got up the type in a week, stereotyped the pages, and had all my machines running on the novel night and day. The demand became enormous, and I was at my wits' ends to meet it. I had first one new machine laid down,

FREDERICK JOHN FARGUS.

then I sent to the makers in all haste for another, then another, and another." The book was republished in the United States, where also it had a phenomenal sale. It has been translated into French, German, Italian, Swedish, Spanish, and Dutch. Its great success was followed up by a rapid publication of other stories and a volume of poems, most of them probably written before "Called Back," all of which have been republished in New York. Their titles are: "Dark Days," "Bound Together," "Carriston's Gift, and other Tales," "A Family Affair," "Slings and Arrows," and "A Cardinal Sin." "Called Back" was dramatized and placed on the stage, both in England and in the United States. Mr. Fargus was the author of several popular songs, including "Some Day," and he left still another posthumous novel, not yet published. He had gone to Italy in pursuit of health when he died.

FENTON, REUBEN E., an American statesman, born in Carroll, Chautauqua County, N. Y., July 1, 1819; died in Jamestown, N. Y., Aug. 25, 1885. His early education and chief training were obtained at Pleasant Hill and Fredonia Academies, in his native county. He was admitted to the bar in 1841, and began practice in Jamestown; but not finding the law congenial with his taste and expectations, he engaged in mercantile pursuits, and in a few years acquired a moderate fortune. Meanwhile he took active interest in politics, and in 1843 was elected supervisor of the town of Carroll, which office he held for eight years, and was chairman of the board for three years. His political affiliation was with the Democratic party at this time, and his personal popularity was evident from his holding office so steadily in a district that was strongly Whig.

In 1852 Mr. Fenton was elected to Congress, and during his first term the Nebraska-Kansas fight was waged in that body. Mr. Fenton was very active in this contest, and was one of the forty-four Northern Democrats that voted against the further extension of slavery. The result of the stand taken by him proved injurious to his prospects for re-election, and when, in 1854, he was nominated by the Whigs and Democrats against the Know-Nothing candidate, he was defeated.

The Republicans of his district nominated Mr. Fenton for Congress in 1856, and he was elected by an overwhelming majority. During this Congress he served on the Committee on Land Claims. He was re-elected for three terms in succession by a large majority at each election. During all the time of his service in the national legislature Mr. Fenton was prominent in the committee-work of the House. He was chairman successively of the Committee on Invalid Pensions and the Committee on Claims, and was also a member of the Committee of Ways and Means. On the outbreak of the civil war he eloquently and heartily supported the cause of the Union, and stood firmly by President Lincoln and his Cabinet in their war measures.

Mr. Fenton's activity and energy in Congress tended materially to increase his reputation in his native State, and in 1864 he was unanimously nominated by the State Convention for Governor of New York. Although his opponent was Horatio Seymour, one of the most popular leaders of the Democracy, his zeal, industry, and skill in conducting the canvass led to his election as well as to that of the entire Republican ticket. He was inaugurated Governor at the opening of the year 1865; his administration was eminently successful, and he was re-elected by an increased majority. His second administration was equally satisfactory with his first, and in 1868 he was elected to succeed Edwin D. Morgan as United States Senator, and served from 1869 to 1875. The only public trust held by him after leaving the Senate was that of chairman of the United States Commission at the International Monetary Conference, in Paris, in 1878.

The latter years of Mr. Fenton's life were no less active than those that had preceded. He traveled largely in his own country, and took up his residence in Jamestown. He became President of the First National Bank in that village, and zealously and actively promoted the interests of the community among whom he lived. Besides looking after the educational welfare of Jamestown, Mr. Fenton projected the bringing of two new railroads into the village, and was one of the main contributors toward establishing there a Swedish orphanage. He also served a term as president of the village. His last public address was made on the occasion of Gen. Grant's funeral, when a memorial service was held in Walnut Grove, his place of residence. Although apparently in excellent health, he was stricken down by heart-disease, while in his office at the bank. He left a wife, two married daughters, and one son.

FINANCIAL REVIEW OF 1885. At the close of this year the feeling was far more encouraging than it had been at any corresponding period since 1881. The iron industries exhibited unmistakable signs of recovery; business enterprises were in a very satisfactory state, and the losses by failure had been comparatively few; the industrial situation was more settled, capital and labor enjoying harmonious relations; wars between the important railroad lines of the country had ended, and peaceful assurances had been sealed by formal compacts; confidence was almost universally expressed in a wise administration of the political affairs of the country; the crops of the year had, with the solitary exception of winter wheat, been abundant; the experience of the previous six months had shown that trade needed but a gentle stimulus to make it active, and that speculation was generally on a healthy basis, and the nation was at peace with all the world. While we had made this progress toward recovery, European nations had suffered from domestic dissensions and foreign complications, and although the situation abroad was less strained in this respect at the close of the year, the war-clouds were by no means entirely dispelled. Financial and trade depression continued, with, unfortunately, but little prospect of immediate relief, and the outlook was in many respects greatly discouraging. The summer of 1885 witnessed a larger concentration of capital in banks, placed there simply for safety and because of inability to employ it, than ever before known. An idea can be formed of the vastness of these deposits by the statement that in the banks of England, France, and Germany there was an accumulation, on or about July 1, of £81,633,835, equal to about $408,169,175, while in New York city alone there were in the associated banks $116,346,200 of gold and its representative. The deposits in the London joint-stock institutions were so large that only nominal rates of interest were allowed; discounts of sixty-day to three-months' bills were made at one half of one per cent., and short loans were one fourth of one per cent. This accumulation of capital was partly due to the stagnation in trade and speculation, in part to the unsettled political situation in Europe, and also to the distrust arising from the silver question, and it is possible that the latter was really the most potent influence in producing this financial inactivity. The nations in the Latin Union were in midsummer conferring as to the further continuance of the compact; India was beginning to feel the pressure of the silver sent thither from China; India Council bills became so plentiful, in consequence of government operations between that country and England, that they steadily declined, thus depressing the market value of silver and therefore depreciating the bullion and foreign value of all these coins, and embarrassing the finances of those countries having a redundancy of this class of coinage. It is therefore reasonable to conclude that gold was accumulated by many of the European nations through fear of possible disturbance resulting from a plethora of silver, and that this will in great part account for the concentration of gold in the principal financial centers. The decision to extend the Latin Union was not reached until November, and even then Belgium did not give her assent to the agreement, and it was not until December that she signed the compact. But this simply provided for liquidation and the marketing of the surplus silver coins of each country, and for that reason did not increase the consumption of the metal. Gradually the market value of silver declined, after July, to 47¼ pence an ounce in September. Then followed a fractional recovery; but by the middle of December the price fell to 46⅞ pence; the demand almost wholly ceased, and dealers and speculators awaited with some anxiety the action of Congress upon the measure to repeal the coinage law of 1878. The President in his message, and the Secretary of the Treasury in his report, ably advocated the passage of such a bill, and nearly all the commercial organizations of the country memorialized Congress in favor of early action. Through the skillful management of the Treasury Department and the co-operation of the banks of this city that derangement of our finances which would have resulted from the enforced circulation of the silver dollar has thus far been prevented, but this is no guarantee that success will continue to attend these efforts if the coinage is not stopped, and hence the anxiety of the commercial and banking interests to secure a repeal of the law. In all probability the price of the metal has already fallen quite as low as it can be expected to decline in the event of a suspension of its further coinage into dollars, and therefore the silver-mine owners of the country can not sustain severe losses; but even if they should, the benefits to our business, industrial, and other interests, which would certainly follow the repeal of the law, would be so important and permanent as entirely to outweigh the comparatively insignificant damage that might be caused by a temporary depreciation in the market value of silver. The following tabular survey of the economical conditions and results of 1885, contrasted with those of the preceding year, is from official returns, and also from the "Commercial and Financial Chronicle":

ECONOMICAL CONDITIONS AND RESULTS.	1884.	1885.
Coin and currency in United States, November 1	$1,541,588,140	$1,556,914,798
Mercantile failures	226,343,427	124,220,321
Imports of merchandise, twelve months	629,261,860	587,551,506
Exports of merchandise, twelve months	749,366,428	688,846,556
Imports of gold and silver, eleven months	89,659,145	34,266,759
Exports of gold and silver, eleven months	25,692,222	39,704,092
Railroads constructed, miles, twelve months	3,813	3,113
Gross earnings of sixty-one railroads, twelve months	$242,634,482	$242,181,545
Wheat raised, bushels	512,763,900	357,112,000
Corn raised, bushels	1,795,528,432	1,936,176,000
Cotton raised, bales	5,669,021	6,669,000
Pig-iron produced, gross tons	4,589,613	4,480,000
Anthracite coal produced, tons, twelve months	30,756,995	31,623,529
Petroleum, barrels	23,704,510	21,025,000
Immigration, twelve months	403,230	326,411

The prices of leading staples on or about the 1st of January, 1886, compared with prices at the same date in 1885, 1884, and 1883, were as follow:

PRICES OF STAPLES.	1883. Jan. 2.	1884. Jan. 2.	1885. Jan. 2.	1886. Jan. 2.
Cotton, middling uplands, per pound........	10 3/16	10½	11⅛	9 3/16
Wool, American XX, per pound	35 @ 43	33 @ 41	34 @ 36	37
Iron, American pig, No. 1, per ton............	25 00 @ 26 00	20 50 @ 21 50	19 50 @ 20 50	18 00 @ 18 50
Steel rails at mills..............................	40 00	35 00	28 00	34 00 @ 35 00
Wheat, No. 2 red winter, per bushel.........	1 09½ @ 1 10½	1 10¾ @ 1 12¾	84 @ 86	92½
Corn, Western, mixed No. 2, per bushel......	66¼ @ 66½	63⅝ @ 64	53 @ 54⅛	50
Pork, mess, per barrel........................	18 37½ @ 18 50	14 75 @ 15 25	12 50 @ 13 00	10 00 @ 10 25

The Money Market.—The average rate for money on call represented by bankers' balances during the first six months of the year 1885 did not exceed 1 per cent., although in April and May there were occasional loans made at 3 and at 4 per cent., which rates, however, only momentarily prevailed, an abundant supply immediately coming upon the market. The rate gradually hardened after July, so that the average was about 1½ per cent. until October, when it became 2. In November an average of 2¾ was reached, and on the 5th of this month the market was manipulated, with a view to its effect upon stocks, so that 10 per cent. was recorded, but the rate at once fell to normal figures. In December this average declined to 2 per cent., and the demand for money was easy until toward the close, when the rate averaged 4 per cent. Commercial paper was in light supply throughout nearly the whole of 1885, and the inquiry was in July and August so urgent that very low rates ruled. The extremes were 5 per cent. early in the year to 2¾ in the summer, for prime, and single names were more freely taken than was the case in 1884, not only because of greater confidence in them, but by reason of the urgency in the demand for notes. The scarcity of paper was largely due to the fact that goods were to a greater extent than before sold for cash; and where notes were given the purchasers of the goods were generally able to market them before the maturity of the notes, and therefore this class of paper did not come upon the street. In the absence of home supplies many of our banks sought notes made in interior cities, and obtained satisfactory returns therefrom. The movement of money for crop purposes was comparatively light this year. The early reports of serious damage to the winter wheat stimulated the speculation in that cereal to such an extent that the export demand was checked, and producers were disposed to withhold their surplus until they could determine what would be the result of the spring-wheat crop. Pending the maturity of this class of wheat, the markets were more or less influenced first by the unsettled condition of political affairs abroad, and next by the speculation based upon the actual outcome of winter wheat, so that it was not until early in the fall that the requirements of money for moving the crops became sufficiently urgent to compel the withdrawal by the interior banks of any considerable portion of their balances on deposit in the New York institutions. Even then the movement was unusually small, and a return flow of money set in toward the end of November. The refusal of the United States Treasurer to permit the exchange of gold for silver certificates, by which, under previous administrations, the transfer of funds to the interior had been greatly facilitated, tended to limit the flow of money to the country, for when bank-notes or legal tenders became scarce gold had to be shipped at unprofitable rates. On the other hand, the withholding of new small legal-tender notes by the Treasury, confining the circulation to those which were mutilated, created such a demand for ones, twos, and fives, from all parts of the country, that our city banks had great difficulty in supplying the inquiries of their correspondents, but accommodated them so far as was possible, and this movement will partly account for the shipments in the summer and early fall. The New York banks received comparatively little foreign gold during the year, the condition of exchange not permitting free importations, and their supply was chiefly derived from the Treasury through the Clearing-House. Late in January it became evident that the relations between the banks and the Treasury Department would soon have to be changed, in case of the inability of the latter to maintain gold and legal-tender payments of its debit balances to the former, and a conference between representatives of the banks and the Secretary of the Treasury was held with a view to the adoption of some plan which would temporarily at least prevent the disturbance resulting from the enforced payment of any portion of such balances with silver dollars or silver certificates. The Secretary had already determined that it was unwise to make a call for bonds, as that would tend to aggravate the trouble by increasing the debit balance of the department. He asked the co-operation of the banks in the efforts to maintain payments on a gold basis, and this aid was promised. Shortly afterward, Jan. 26, the Secretary was placed in a somewhat embarrassing position by the passage by the House of Representatives of a resolution calling for information as to whether any favoritism was shown the banks of this city in the matter of silver payments. The Clearing-Houses at Boston, Philadelphia, and some of the Western cities had for some time been receiving silver certificates in part payment of balances due by the Treasury, and complaints from some of these banks are understood to have instigated the action of the House Committee on Coinage and Currency. The embarrassments of the Secretary were happily relieved, Feb. 9, by the Assistant Treasurer in this city, who on that day sent to the Clearing-House, in part payment of the debit balance, $100,000 in silver certificates, which were accepted. This enabled the Secretary to make a satisfactory reply to the resolution of the House of Representatives. With this exception the payments by the department to the Clearing-House throughout the entire year were made in gold or United States notes. About the middle of July the Treasurer conferred with the Clearing-House committee respecting measures to relieve the department of some portion of its unavailable assets in the form of fractional silver coin, of which there were about $31,000,000 in the various depositories. The Treasury needed gold, at least for temporary use, in order to meet interest and other payments then about falling due, and desired to avoid encroaching upon the $100,000,000 reserve set apart for the redemption of legal tenders. The department had no authority to borrow, and whatever relief was obtained would have to be voluntarily offered. Under these circumstances the banks agreed to advance to the Treasury $5,915,000 gold, taking in exchange the Assistant Treasurer's certificate of deposit for a like amount of fractional silver coin then in the vaults ot the New York office. The Clearing-House issued certificates to the banks contributing their quota, thus securing these institutions. The relief to the Treasury was effective, and by November the gold balance of the department had been so largely augmented by conservative management that the amount advanced by the banks was returned on the 6th of that month, and the certificate for the fractional silver given by the Assistant Treasurer was canceled. It was understood at the time the exchange of gold was made that either $10,000,000 or $20,000,000 could be had if desired, and the amount which the banks undertook to deliver was $6,000,000, but one institution declined to become a party to the agreement, and the deduction of this quota will account for the odd amount actually delivered. The transaction had an assuring effect upon capital at the time it was made, by at once relieving apprehensions as to the ability of the Secretary of the Treasury to maintain gold payments at least until Congress could act upon a bill repealing the silver coinage act of 1878, and at the same time it gave evidence of the willingness of the banks to aid, by every means in their power, in maintaining the declared policy of the Treasury. The accumulations of gold by the associated banks of this city during 1885 were unprecedented in amount, and the total and surplus reserves were larger on July 18 than ever previously recorded. At the beginning of the year the banks held $87,867,800 gold. By the above-named date there had been added $28,478,400, making the total amount held $116,346,200. This was reduced by withdrawals to the interior, and absorption by the Treasury, by the sum of $24,765,100 on Dec. 5, leaving $91,581,100 in the banks on that date. The legal tenders on hand Jan. 3 were $37,365,900. Between the 17th of that month and the 4th of April, this amount fluctuated between $41,094,700 and $30,812,500, but after the last-named date the gain was gradual, and by July 18 the banks held $45,198,100 of these notes. Then the movement in response to the demand for currency, caused by the scarcity of small bills, brought about by the withholding of ones and twos, and later a drain for crop purposes, caused a reduction of $18,480,600, so that Oct. 24 the banks held $26,717,500, or the minimum for the year. Thereafter the gain was gradual to the end of December. The bank loans Jan. 3 amounted to $297,887,700. There was a fall to $293,746,700 by the end of the month, then a recovery to $303,821,800 by March 14, followed by a fall to the minimum of the year, $293,146,200, May 29. This marked the turning-point, and thereafter to the 31st of October, when they stood at $344,360,800, the banks freely loaned on share and bond collateral, thus indirectly aiding the upward movement in the stock market. Then came liquidations of some of these loans, due to realizations, which carried the amount down to $336,938,300 by Dec. 26. The deposits of the banks were, at the lowest point of the year, $340,816,300, Jan. 3. Thereafter they gradually increased to $391,804,900 Aug. 22, and then fell to $373,953,000 Dec. 26. Bank clearings, reflecting mainly the speculation at this center in stocks and staples, exhibited a daily average of $104,101,695 for the week ended Jan 3. From this point they fell to $66,922,415 by April 11, and then increased to $155,083,323, the maximum of the year, Nov. 7. On the third and fourth weeks of that month, when the business at the Stock Exchange was unprecedented in magnitude, the daily average was $144,823,152 and $150,085,159 for each week respectively.

The Comptroller of the Currency reports the failures of only four national banks during the year ended Nov. 1, none of which was located in this city. A dividend of 15 per cent., making 40 in all, has been paid to the depositors of the Marine National Bank, which failed last year. The affairs of the Metropolitan National Bank, which succumbed in May, 1884, are still in liquidation, and there were outstanding, Oct. 13, $2,550,000 Clearing-House loan certificates issued to this bank, secured by a deposit in trust of certain securities and bills receivable, which the Loan Committee had not at that time been able to market. A year ago the amount outstanding of these certificates was $5,290,000, out of a total issue, between May 15 and June 6, 1884, of $24,915,000, showing the cancellation during the twelve months of only $2,740.000.

The condition of the New York Clearing-House banks, the rates for money and exchange, and prices for United States bonds, on or about Jan. 1, 1886, as compared with the preceding two years, are shown in the following summary:

BANK RETURNS, ETC.	1884.	1885.	1886.
NEW YORK CITY BANKS:			
Loans and discounts	$327,535,700	$295,874,200	$339,909,800
Specie	60,468,100	88,170,500	89,721,100
Circulation	15,456,800	11,618,600	9,979,800
Net deposits	320,793,000	335,272,100	376,959,300
Legal tenders	26,479,100	36,592,300	28,808,200
Required reserve	80,198,250	83,818,025	94,239,825
Reserve held	86,947,200	124,762,800	118,529,300
Surplus reserve	$6,748,950	$40,944,775	$24,289,475
MONEY, EXCHANGE, SILVER:			
Call loans	1 @ 2½	1½ @ 2	2½ @ 5
Prime paper, sixty days	5 @ 5½	4½ @ 5¼	4 @ 5
Silver in London, per ounce	51*d.*	49⅞*d.*	46 15/16*d.*
Prime sterling bills, sixty days	4 82½	4 81	4 86
UNITED STATES BONDS:			
3s, registered, option United States	100¼	101¼	102
6s, currency, 1898	134	131	132⅞
4½s, 1891, coupon	114⅞	113⅛	112⅞
4s of 1907, coupon	123¾	121⅞	123⅛

Appended is the Clearing-House statement of totals at the beginning of each quarter of 1885, and at the end of the year:

DATE.	Loans and discounts.	Specie.	Circulation.	Net deposits.	Legal tenders.
January 3	$297,887,700	$87,867,800	$11,398,800	$340,816,300	$37,356,900
March 28	300,981,200	104,752,800	10,899,700	353,448,900	32,029,900
June 27	303,735,500	113,956,600	9,910,700	376,763,500	48,628,700
September 26	329,089,100	109,254,400	9,810,600	385,977,200	32,171,800
December 26	336,938,300	90,988,200	9,924,400	373,958,000	27,212,700

Foreign Exchange.—The imports of merchandise for twelve months ended Dec. 31, 1885, were $41,710,354 below those for the corresponding period in 1884, and the exports of domestic and foreign produce for the same time were $60,519,872 less. The excess of merchandise exports over imports for twelve months ended Dec. 31, 1885, was $101,295,050, against $120,104,568 for the same time in 1884. There was an excess of exports over imports of specie and bullion of $3,283,322 for twelve months ended Dec. 31, 1885, against $27,049,560 for the same time in 1884. The excess of exports over imports of merchandise and specie amounted for twelve months to Dec. 31, 1885, to $104,578,372, against $147,154,128 for the corresponding period in 1884. Foreign exchange was affected in the early part of the year by the investment demand which was the leading feature of the market toward the close of 1884, and this inquiry continued until February, when the decline in the rate for money in London made such investments less profitable. The failure of Congress to take any action looking to a suspension of the coinage of the standard silver dollar caused a renewal of the demand, and this was further stimulated by the unsettled market in London, resulting from the news of the reverses in the Soudan. The rates fell off in March, in consequence of a lighter inquiry and a little better supply of bills, but they subsequently hardened, and one feature was a demand for remittance to Paris, bankers discriminating against francs, which could be paid in silver, and, therefore, sterling was preferred. By the middle of April the unsettled state of political affairs in England, growing out of the Afghan boundary dispute, caused an advance in exchange to within one cent per pound sterling of the gold exporting point, commercial bills were scarce by reason of speculative manipulation of the breadstuffs markets, and bankers remitted freely, with a view of fortifying their principals and correspondents against possible emergencies. The subsidence of the war-feeling early in May aided in turning exchange downward, after which the market became dull, bankers being indisposed to draw in advance of current needs, because of the low rates for money prevailing not only in London but here. A pressure of bills and the absence of demand made the tone heavy in June and until the middle of July, when there was a partial recovery, due to a renewal of the unsettled feeling in London, which was partly caused by the failure of the Munster Bank in Ireland. Some bankers who drew in June, in anticipation of a movement in breadstuffs, were disappointed, because of the check to exports, and were compelled either to cover or renew their bills, and this stimulated a reaction in August. Then followed a more liberal supply of bankers' drafts, made against outgoing securities, and the pressure of bills drawn in anticipation of an early movement of cotton, which, together, carried exchange so low that in September a small amount of gold was started from London and Paris, but further importations were soon made unprofitable by a recovery in sterling. The expected movement of cotton was checked by speculation, thus compelling the covering of bills sold in advance, and, although during October and November the offerings by the *arbitrage* houses of drafts made against outgoing securities, bought for speculation and investment, were large, the demand was sufficiently urgent to keep rates comparatively firm, and this condition of the market was stimulated by an advance in the Bank of England minimum to 3 per cent., and by a rise in the open market rate in London caused by withdrawals of gold for Germany, and by the outbreak of war in the Balkan Peninsula. On Dec. 17 the bank minimum was further advanced to 4 per cent., the demand for sterling for speculation, investment, and remittance, absorbed all the offerings, rates moved up to the gold-exporting point on the 21st, and $600,000 of that metal was shipped to London. The high prices for sterling, however, soon brought out a better supply of bills, and rates fell off to points which prevented further exports of gold, but the market was steady at the decline to the close of the year.

Manufacturing Industries.—The feeling among manufacturers was rather more hopeful at the beginning of 1885 than it had been at any time since the depression commenced. Prices of almost all raw and manufactured staples were at about the lowest points, and it was regarded as almost certain that there would not be any further material decline. Production had been restricted, so that the country was almost bare of goods, and consumption was steadily reducing stocks. The auction-sales of dry goods early in the spring were so conducted as to make a wide distribution of staple articles, and the buyers were assured that they could not expect to duplicate the fabrics at the auction prices. The purchases were promptly disposed of, the demand was stimulated, and a healthy impulse was imparted to the fall trade, causing it to be the most active of any season for a number of years. This, however, had comparatively little effect upon the manufacturers, for cotton was too high and goods too low to make production very profitable, and the output of the mills was mostly confined to standard fabrics. Speculation in cotton, after the new crop year opened, caused high prices for the staple to be maintained, and therefore continued to restrict manufacturing. The iron market was dull and depressed until June, and about the only feature was an increased demand for structural and other kinds of manufactured iron. The steel-rail interests decided, in the above-named month, to limit their output to what then seemed likely to equal the wants of the railroads for 1886, and they fixed upon a production of 775,000 tons. The successful result of the negotiations for the settlement of the railroad troubles gave an unexpected impetus to this branch of the trade, the demand increased, prices advanced, stocks were steadily absorbed, and the output of steel rails for 1886 was increased to 1,000,000 tons. As the year closes there appears a fair prospect that this improvement will continue. The anthracite-coal combination, which went into effect early in the year, proved generally satisfactory, although the refusal of the Pennsylvania Railroad Company to join the other companies threatened to derange the plans. In the summer there was some friction caused by the desire on the part of some of the operators to restrict the output, but there soon arose a better demand, which restored harmony. For the calendar year ended Dec. 31, 1885, the output of anthracite coal was 31,623,529 tons, against 30,756,995 for 1884. The production of pig-iron for the year was 4,529,869 tons, against 4,589,613 for 1884—both coal and iron being partly estimated. The new railroad mileage was 3,113 miles, against 3,813 in 1884.

The Crops.—Injury to winter wheat by freezing and drought reduced the yield of this staple to 217,000,000 bushels. The crop of spring wheat matured and was gathered under favorable conditions, and the output was reported at about 140,000,000 bushels, making the yield of both 357,112,000. Were it not for the fact that there were left over at the end of the last crop-year an estimated amount of nearly 110,000,000 bushels, there would have been a serious shortage in the supply. Owing to various causes, chiefly speculative, the export demand for breadstuffs has been limited, the shipments of wheat and flour to Nov. 30 being only 88,047,566 bushels, and therefore it seems probable that the stocks remaining in the country will be ample for all requirements, at least until the new crop is gathered. The yield of corn is claimed to have been unprecedented, being reported at 1,936,176,000 bushels; that of oats is said to have exceeded 600,000,000 bushels; flax was more extensively cultivated in the extreme Northwest than ever before; hay yielded about 47,000,000 tons, and until September cotton promised the largest crop on record, but floods and heavy rains in Texas during that month caused a reduction, so that the crop is now estimated at about 6,669,000 bales. The European cereal crops were generally below the average, and this fact, together with the short yield of our winter wheat, and the unsettled political situation in Europe early in the year, stimulated a speculative movement which kept prices here relatively higher than those in Liverpool, and thus prevented our profiting by the requirements of foreign countries. While prices abroad were not high, they were sufficiently so to permit wheat to be imported from India, and this movement was augmented by the fall in silver, which, by depreciating the gold value of the rupee, enabled the Indian producer to obtain more of these coins for his grain than when silver was higher. It seems probable, therefore, that European requirements for wheat, until the new crop bcomes available, will be largely met by importations from the British colonies.

Western farmers are understood to have marketed the bulk of their crop, but in the extreme Northwest large supplies are still held, awaiting better prices than those now ruling; the farmers being able to wait, having realized enough for their present needs by the sale of flax and other products. In the winter-wheat belt the producers generally disposed of their grain early in the season, obtaining in most cases satisfactory returns. Taking the prices in the New York market on or about the 1st of January each year, and the total yield for the previous season, we have the following approximate results in quantities and value:

THE CROPS.	1884.			1885.		
	Yield, bushels.	Price, Jan. 2, 1885.	Value of crop.	Yield, bushels.	Price, Jan. 2, 1886.	Value of crop.
Wheat	512,763,900	$0·84	$430,721,676	357,112,000	$0·92½	$330,828,600
Corn	1,795,528,432	·53	951,630,068	1,936,176,000	·50	968,088,000
Cotton (bales)	5,669,021	·11⅛	303,356,399	6,669,000	·09$\frac{3}{16}$	300,230,043

Railroads.—The trunk-line war which began during the fall of 1884 was vigorously prosecuted until July, when, negotiations having been completed for the settlement of the differences between the Vanderbilt and the Pennsylvania interests, growing out of the construction of the South Pennsylvania, and consents of a majority of West Shore bondholders to the proposed reorganization and lease to the New York Central having been obtained, the war practically ended, although it was not until early in November that rates were restored, the pooling contract between the trunk lines and their Western connections having been adopted on the 6th of that month. This contract embraced freight and passenger business, and its acceptance by the Baltimore and Ohio was made conditional upon that line obtaining New York facilities. Pending negotiations between Mr. Garrett and the Pennsylvania for an outlet to this city, the Baltimore and Ohio made arrangements for building an independent line from Bound Brook to Elizabethport, N. J., intending to avail itself of a bridge over Arthur Kills and the terminal facilities of the Staten Island Rapid Transit Company on the north side of that island. This movement only partially deranged the plans of the other trunk lines, and the restoration of rates was subsequently ordered by all the roads except the Baltimore and Ohio; this line, however, manifesting no intention to cut either on passengers or freight. The lease of the West Shore to the New York Central was enjoined, but the road was sold for $22,000,000 to individuals on Nov. 24, and, the suit having been settled out of court, the road was reorganized and leased, as originally contemplated, on Dec. 4. With the exception of a temporary misunderstanding in March between the Pacific Mail Steamship Company and the Pacific railroads forming the Transcontinental Association, a disagreement between the granger roads later in the spring and a rate-war in which the East Tennessee and other Southern lines engaged during the summer, the relations of the railroads in the West were generally harmonious, and, compared with the same time in 1884, the earnings exhibited marked gains. The following shows gross and net earnings of the principal trunk roads, the reports, except for the Pennsylvania, being made for fiscal years:

ROADS.	1879-'80.	1880-'81.	1881-'82.	1882-'83.	1883-'84.	1884-'85.
PENNSYLVANIA:						
Gross earnings	$41,260,073	$44,124,182	$49,079,884	$51,083,252	$48,566,911	$41,568,345*
Net earnings	16,635,025	17,414,373	18,432,429	19,336,102	18,039,902	14,776,068
NEW YORK CENTRAL:						
Gross earnings	33,175,913	32,348,395	30,628,781	33,770,722	28,148,667	24,429,441
Net earnings	15,326,019	12,883,610	11,232,807	13,020,128	10,299,356	8,110,069
ERIE:						
Gross earnings	15,942,023	20,715,605	19,975,774	22,802,246	21,637,435	18,934,573
Net earnings	4,767,324	7,459,375	6,887,681	7,357,663	5,279,358	4,587,056
BALTIMORE AND OHIO:						
Gross earnings	18,317,740	18,463,877	18,383,875	19,739,837	19,436,607	16,616,642
Net earnings	7,986,970	7,073,398	7,454,662	8,705,823	7,760,300	5,643,057

* Eleven months to November 30.

The Stock Market.—There appeared to be a more confident feeling among stock-speculators at the opening of 1885, and a conviction that the period of depression was nearing its end. The announcement, during the first week, that an anthracite-coal combination on an allotment basis had been agreed upon, encouraged a rise in the coal properties. But the improvement was checked by a war of rates between the rival telegraph companies, and by the failure of the trunk lines of railroad to restore passenger rates, owing to the opposition of the western connections of the New York Central, thus indicating a purpose on the part of Mr. Vanderbilt to vigorously prosecute the war against the West Shore. The news on the 16th of the failure of John J. Cisco & Son had an unsettling effect, particularly upon Louisville and Nashville stock, and Houston and Texas Central bonds. The announcement that the Pennsylvania Railroad Company would refuse to act with the coal combination had a disturbing influence upon the coal properties, for it was supposed that this would, at least partially, derange the plans of the combination; but the other anthracite producers decided to carry out the agreement without reference to the Pennsylvania. Disquieting rumors regarding the standing of prominent financial concerns, heavy defalcations by bank officers in Norwich, a cut to one dollar in emigrant rates by the Pennsylvania Railroad, and the unfavorable decision of the Court of Appeals in the Western Union tax case, altogether contributed to keep the market feverish and generally weak until near the close of the month of January, when the clique in Lackawanna took advantage of its oversold condition and sharply advanced the price, and this movement stimulated a rise in some of the other oversold stocks, and the market was strong for the remainder of the month. An improvement in the industrial and business situation encouraged a further advance in stocks during the first half of February; but then came an irregular decline, caused by the closing out or settlement of short contracts in those properties which had been most rapidly advanced. This was followed by an upward reaction, which continued until the last week, when the failure of the plan to procure a suspension of the coinage of the standard silver dollar encouraged the bears to attack the market, and it was more or less unsettled to the close of the month. The fact that an extra session of Congress was made unnecessary, and the feeling of confidence inspired by the advent of the new Administration, caused March to open rather auspiciously. The announcement of a reduction of 2 per cent. per annum in the New York Central dividend had only a temporary influence, for the depressing effect was counteracted by a renewal of the manipulation in Lackawanna. Pacific Mail advanced on the news that Congress had granted a subsidy, equal to about 2 per cent. upon the capital of the company, for carrying the mails, and the bears seemed indisposed to indulge in liberal speculative sales, having recently suffered such severe losses. The disturbing events in Europe, resulting from the advance of the Russians upon the Afghan frontier, aided to some extent an advance in prices, and the tone was strong until the third week in the month, when the increased embarrassments of the Reading, the apparent withdrawal of bull support, and a sharp fall in Union Pacific, Central Pacific, and Pacific Mail, growing out of a rupture of the transcontinental pooling association, had an unsettling effect; but by the close of the month the market rallied under the influence of exciting news from Europe, which indicated a speedy collision between Russia and England. The stocks of the Pacific roads and of Pacific Mail recovered on the prospect of a new pooling contract, and the trunk-line shares advanced on news of the extension of the east-bound pool until May 1st; but Lake Shore was subsequently unfavorably affected by the passing of the dividend, and St. Paul common by the reduction of its quarterly dividend to 1½ per cent. Early in April the New York, Chicago, and St. Louis was placed in the hands of a receiver. Central Pacific fell, on the report that $10,000,000 bonds would be issued to secure the floating debt; but it subsequently recovered, on the news that the road had been leased to the Southern Pacific Company. Central New Jersey declined in consequence of default being made in the interest on the first mortgage. Pacific Mail dropped, on a report, afterward denied, that the steamship "Colon" had been burned by the insurgents at Aspinwall, and more peaceful news from Europe contributed to make the market heavy. There was a recovery during the second week in the month, caused by more exciting European war reports, and by a renewal of manipulation; but although the foreign markets were excited toward the close of the month by the discussion of the Penjdeh incident, preparations for a conflict, and the demand of the British ministry for a war credit of £11,000,000, the influence of these events was to a great extent counteracted by an advance in sterling and troubles in Western railroad pools, which encouraged free selling of the granger stocks. Peace negotiations between England and Russia, the decision of the trunk-line presidents to abandon the pool, decreased earnings of the Vanderbilt roads and Erie, and cutting of rates by the Eastern and Western roads, induced the bears to attack the market early in May; but by the middle of the month the Western railroad troubles were settled, and the bulls took advantage of the large short interest in the leading stocks to advance prices. After the short contracts were covered, the tone became heavy, the unfavorable reports regarding the winter-wheat crop had a depressing effect upon the speculation, and the market was more or less unsettled to the close of the month. In June there was a more substantial recovery than had at any time previously been recorded. The upward movement up to this time had been mainly the result of manipulation directed against the bear speculators, and aided by influences more or less of a temporary character. Early in the month exchange fell so near to the gold-importing point as to make it probable that we would ere long receive some of that metal from Europe, or at least that there was no danger that we would be called to part with any of our accumulations of it, and this tended to improve the financial situation. It was announced that some of the most radical advocates of a continuation of silver coinage had changed their views, and that the South was almost a unit in favor of repealing the coinage law. The European political situation was peaceful, the Anglo-Russian trouble having been adjusted, and this was accepted as a guarantee of more settled financial affairs abroad. The United States Treasury policy had thus far proved successful, the gradual retirement of silver certificates having aided in augmenting the gold balance of the department. There were rumors of a change of management of the West Shore through the retirement of one of the receivers; but the negotiations to this end were abandoned in consequence of the failure to procure the financial relief required. There was evidence of purchases in this market by Europeans of stocks and bonds for investment, indicating greater confidence in American railroad properties. The movement was comparatively steady until the 8th, when the news of tho defeat of the Gladstone ministry in Great Britain had a partially unsettling effect, the bears attacking the market on the theory that a change of ministry would result in reviving the Anglo-Russian dispute. The bulls, however, promptly checked the decline, and turned prices so decidedly upward that the bears hastily covered their short contracts. One important event was the election on the 17th of Hon. Chauncey M. Depew to the presidency of the New York Central, made vacant by the death of Mr. Thomas Rutter. This was immediately followed by a rise in this stock and in the other Vanderbilt properties, and then combinations were formed in the remaining specialties with a view to a vigorous bull movement. The commission-houses reported a better inquiry from non-professionals for stocks than they had enjoyed for many months, and there was reported to be good investment-buying from all sections of tho country. It subsequently appeared that, upon the accession of Mr. Depew to the presidency of the New York Central, he opened negotiations for the settlement of the differences between Mr. Vanderbilt and the Pennsylvania, which troubles grew out of the building by the former of the South Pennsylvania road, and Mr. Depew also set on foot the negotiations for the reorganization and lease of the West Shore. The early knowledge of these movements possessed by Mr. Vanderbilt's friends and following, induced them to buy largely of the trunk-line properties, and this will in great part account for the movement in these specialties. Toward the close of the month realizing sales, a fall in Pacific Mail caused by news of the loss of the steamship City of Tokio, a drop in New York Central due to the announcement of a dividend of one half of one per cent. for the quarter, the smallest ever declared, and reports of a large deficit in six months' operation of Lake Shore, contributed to make the market heavy. Early in July reports of a conference between the Vanderbilt and Pennsylvania interests in relation to the South Pennsylvania stimulated further purchases of the Vanderbilt properties, and the grangers were favorably influenced by the reports concerning the crop of spring-sown wheat. Later in the month it was announced that a majority of West Shore bondholders had assented to the proposition for a reorganization and lease of the road to the New York Central, and, as it was seen that this would pave the way for an adjustment of all the trunk-line troubles, there was very confident buying of all the principal stocks, and the advance was almost uninterrupted for the remainder of the month and until about the third week in August, when the bull movement culminated. The market was irregular after this to the close of the month. Early in September the grangers were unfavorably influenced by the reduction of the dividend on Chicago and Northwestern; the trunk lines renewed cutting of freight rates, prices being forced so low that some roads refused to carry goods when the rates offered were below the cost of hauling, and the coal-trade became unsettled in consequence of temporary overproduction. This condition of affairs encouraged bearish demonstrations on the market, and it soon became largely oversold. The decided improvement in the business situation resulting mainly from the generally favorable news regarding the cereal crops, and the prospects of an abundant yield of cotton, aided in a recovery, but during the last week in the month there was an irregular speculation with St. Paul about the weakest, this stock being affected by the decision of the directors to issue $5,000,000 of preferred stock to retire the floating debt. Ono incident was the failure, on the 29th, of Soutter & Company, a prominent house on the bear side of the market. This was followed on the 2d of October by the suspension of William Heath & Company, and of Henry N. Smith, both largely short of the leading stocks. These failures were for important amounts, and the announcement had an unsettling effect while the outstanding contracts were being adjusted under the rules of the Exchange. After the shock was over, it was found that the bears were thoroughly demoralized, and the bulls determined to take advantage of the fact and move the market upward. This manipulation was successful, and the advance was stimulated by news of the most favorable character. The earnings of the granger roads showed a marked improvement; the managers of the trunk lines commenced their conferences for the purpose of arranging new pools, and cliques were formed in Western Union, in the low-priced Southwesterns, and in the cheap fancy stocks, and commission-houses reported an active demand for stocks from speculators, who until then had not made their appearance in the market. One feature was a sharp rise in Reading, which, it was subsequently reported, was manipulated for the purpose of enabling Mr. Vanderbilt to unload. Another feature was a sustained upward movement in St. Paul, due to purchases by a Chicago combination of speculators. The tone was very strong for the remainder of the month, and in November until about the 20th, London investors and the arbitrage houses liberally buying, and the earnings of the granger and trunk-line roads steadily increasing. One important event was the announcement on the 6th that the presidents of the trunk lines had agreed upon a pooling contract embracing both passengers and freight, and this news further stimulated the rise in these properties. The Baltimore and Ohio refused to become a party to the agreement until it obtained facilities for New York business, but this fact was not made known until the third week in the month. Arrangements with the Pennsylvania for an entrance to this city proving unsatisfactory to the Baltimore and Ohio, Mr. Garrett on the 20th made an agreement to use the terminal facilities of the Staten Island Rapid Transit Company, and announced his intention to build an independent connecting line. This news had an unsettling effect upon the market, but it recovered by the 24th, when it was made known that the West Shore had been bought by individuals, the New York Central being enjoined from leasing it. There was a moderately strong undertone to the close of the month, although the speculation was less active than during the second and third weeks, when the transactions were unprecedented in magnitude. The sales of the month amounted to 13,508,025 shares, the largest ever recorded. Early in December the delay in announcing the decision in the West Shore injunction suit had a tendency to limit operations in the Vanderbilt specialties, but the Eries were strong, on the news that the scheme for funding the floating debt and four past-due coupons of the second consolidated mortgage was meeting with the approval of the bondholders. The stocks of the Union and Central Pacific roads were unfavorably affected by the issue of new regulations by the Commissioner of Railroads concerning reports, and the Southwesterns were heavy. On the 4th the West Shore case was settled out of court by the withdrawal of the suit upon which the injunction against the New York Central was granted, and the road was reorganized and promptly leased to the Central as originally contemplated. This news started the market upward, but realizing sales immediately followed, and the bears assailed those of the specialties that had the least protection, but the declines were not important. The sudden death of Mr. William H. Vanderbilt on the 8th was not known until after the close of the market, and opportunity was therefore given to make arrangements to prevent a serious decline either in London or New York on the following day. The efforts were so successful that the London market speedily recovered, and the effects here of the shock were confined to the first twenty minutes after the opening of the Exchange. The market gradually became steadier, and it closed strong. Pending the announcement of the provisions of the will, the speculation was irregular and the tendency downward. When it was seen that the bulk of the estate was left to the two elder sons, and that the share and bond property could not be sold without the consent of all the heirs, there appeared to be a more confident feeling concerning the Vanderbilt specialties, but subsequently the market was raided on disquieting reports, and it was more or less unsettled until the middle of the month. Then its oversold condition aided a recovery. But the improved tone did not continue, for free selling of Texas Pacific on a report, subsequently confirmed, that the road would be placed in the hands of receivers, tended to depress the Southwesterns; although Missouri, Kansas, and Texas and Missouri Pacific recovered sharply when the announcement of the Texas Pacific receivership was made on the 17th. The market was irregular, but with a moderately strong undertone until the 22d, when news of preparations for the shipment of gold to Europe aided the bears in breaking down the leading stocks; but the small amount of gold exported and a subsequent decline in exchange encouraged a reaction, and the market was generally strong for the remainder of the year.

The following is a list of quotations of leading stocks, Jan. 2, 1884, 1885, and 1886:

LEADING STOCKS.	1884.	1885.	1886.
New York Central	112	86¼	106⅛
Erie	20¾	14⅛	20⅞
Lake Shore	94⅝	61⅛	89
Michigan Central	85	55	77
Rock Island	116⅜	105	128½
Illinois Central	182¼	121½	140
Northwestern, common	116¼	84⅜	110¼
St. Paul, common	92	70⅞	90⅜
Dela., Lackawanna, and Western	116⅛	88¼	125⅛
Central New Jersey	84⅛	39¼	44

The following is a list of a few of the speculative stocks, the highest prices at which they sold in 1884, and the highest and lowest in 1885:

SPECULATIVE AND OTHER SHARES.	1884.	1885.	
	Highest.	Highest.	Lowest.
Wabash Pacific	19¾	15⅛	2
Wabash, preferred	32	25	6⅛
Central and Hudson	122	107½	81¾
Canada Southern	57⅞	47½	23
Erie	28⅝	27⅞	9¼
Union Pacific	84⅝	62¾	41
Lake Shore	104¾	89⅞	50¼
Del., Lackawanna, and Western	133⅛	129⅝	82⅝
Northwestern	124	115¼	84⅜
St Paul	94¼	99	64¾
Ohio and Mississippi	25⅞	28⅛	10¼
New Jersey Central	90	52	31
Canadian Pacific	58¼	63¼	35¾
Oregon Transcontinental	34⅝	36⅞	10¾
Western Union	78⅛	81⅝	53⅛
Pacific Mail	57⅛	70	40½
Delaware and Hudson	114	100⅜	66⅛
Denver and Rio Grande	25⅝	24⅛	4⅜
Northern Pacific	27	31¼	15
Northern Pacific, preferred	57⅝	65⅝	36⅛
Missouri, Kansas, and Texas	23¼	37⅛	14⅛
Missouri Pacific	100	111¾	89⅛
Louisville and Nashville	51⅜	51¾	22
Reading	60⅝	26	13
Omaha	38⅛	44⅛	18⅛
Omaha, preferred	100	105¾	66
Central Pacific	67¾	49	26⅛
Lake Erie and Western	19¾	21¼	1⅝
Peoria, Decatur, and Evansville	17¾	24	7⅛
Texas Pacific	22⅝	25⅛	9¼
Richmond and Danville	61	87	44⅞
Richmond Terminal	32	43¼	10⅛
N. Y., Chicago, and St. Louis	10⅛	11⅝	1⅞
N. Y., Chic., and St. Louis, pref.	20¾	26	4
Oregon Navigation	112	111½	59¾
Minneapolis and St. Louis	18⅛	26	10½
Minneapolis and St. Louis, pref.	36⅛	56¾	24⅛
New York and New England	17⅛	39¾	12

The total sales of all stocks for the year 1885 were 93,184,478 shares, against 95,416,368 in 1884, 96,037,905 in 1883, 113,720,665 in 1882, 113,392,685 in 1881, 97,200,000 in 1880, and 74,166,652 in 1879. The transactions in Government bonds during 1885 amounted to $15,579,200, and in State and railroad bonds to $662,773,000.

FINE ARTS. Under this title are treated the principal art events of the past two years, ending with December, 1885, including especially the great exhibitions in Europe and the United States, the sales and acquisitions of pictures, and the erection of public statues and monuments.

Paris: Salon.—The exhibition (May 1 to June 30, 1884) comprised 4,658 numbers, classified as follows: Paintings, 2,488; cartoons, water-colors, pastels, porcelain pictures, etc., 749; sculpture, 746; engraving in medals and precious stones, 36; architecture, 165; engraving, 474. The medal of honor in the section of engraving was awarded to Félix Bracquemond. No first-class medal in painting was given, but first-class medals in sculpture were awarded to Ferdinand Levillain, Clément Léopold Steiner, and François Laurent Rolard; in architecture to Albert Ballu and André Gaspard; and in engraving to Achille Jacquet and Aristide Lionel Lecouteux. The receipts were 290,000 francs. Among the more important pictures exhibited was Bouguereau's "Youth of Bacchus," an immense canvas, an academically correct picture, though not especially interesting save as an illustration of the author's graceful style. The youthful god, borne aloft on the shoulders of fauns and surrounded by nude dancing nymphs, is the center of a procession passing through a glade. At the right it is led by a pair of centaurs, playing on musical instruments, and at the left Silenus on an ass brings up the rear.

Another immense canvas, by Fernand Cormon, is entitled "Return from the Bear-Hunt—Age of Stone." In the center, at the entrance of a rude cabin, built of rough tree-trunks, sits an aged man, the head of the clan, with knife and flint-axe in hand. Before him lies the carcass of a bear, which a party of skin-clad hunters, attended by several wolfish-looking dogs, have just brought in. At the right are the women and children of the tribe. It has been purchased by the state for the Museum of Saint-Germain.

A still larger canvas and perhaps more important picture, although the subject is an atrocious one, is the "Massacre of Machécoul," by François Flameng, representing an incident in the Vendean war. Under the walls of a dismantled château, with a burning village in the background, lie many corpses, some of them women, mercilessly shot and left to die in heaps where they fell. At the left, in the foreground, is a large tree, to the trunk of which is fastened by cords the body of an old man, perhaps the seigneur, his head fallen forward, and the blood still dripping from a ghastly wound in his body. In the center foreground a group of richly dressed aristocrats, gentlemen and ladies, accompanied by a band of Chouans, are walking among the corpses, the women daintily lifting their garments to save them from contact with the blood-stained ground.

Another striking canvas, the "Quartette," by W. T. Dannat, the American artist, represents four amateur musicians singing in a little shop, into which the light streams down a steep staircase in the background. It was sent to New York at the close of the *Salon.*

Raphael Collin's "L'Été" exhibits a company of young women assembled in a flowery meadow before and after bathing, the scene suggesting the heats of summer. It is the work of one of Cabanel's most successful pupils, and shows rare flesh-painting.

The "Aurora" of Jules Lefebvre is a finely drawn and delicately modeled nude figure wafted by a gentle morning breeze above the surface of a pool, accompanied by a mass of vapors tinted with the rose of dawn. Purchased by S. P. Avery.

Evariste Luminais's "Flight of Gradlon" is a melodramatic picture illustrative of the story of King Gradlon, who, while riding with St. Gwenolé, was overtaken by the tide. Taking his daughter on the crupper, the riders galloped for their lives until nearly overtaken by the waves, when the king, by the advice of the holy man, cast off the "demon," his daughter, and thus escaped just as they were about to be overwhelmed.

Gérôme's "Sale of Slaves at Rome," a fine example of his skill in painting the nude, exhibits a young female slave standing erect on a high platform, exposed to the gaze of a shouting crowd of eager bidders, whose extended hands indicate their admiration of her beauty.

In the "Salle Graffard" Jean Béraud has presented a vigorous satire on the times, which set all Paris laughing. On a lofty rostrum in the Salle Graffard, a socialist orator, with his dirty hand stretched on high, is bawling his doctrines to an audience of sottish ragamuffins, who, amid clouds of tobacco-smoke, shout and clap their hands at his denunciations of society.

An enormous picture called "The Mercenaries of Carthage," by Gustave Surand, illustrates an incident in the "Salammbô" of Gustave Flaubert. In the shadow of a sunlit, rocky pass, a band of strangely armed barbarians, with their women and children, march with amazement before a line of huge lions, crucified by the roadside by Carthaginian peasants, whose sheep had been devoured, as a reminder to other lions of what they may expect if they display a similar taste for mutton.

Another immense canvas, entitled the "Sacred Wood," by Puvis de Chavannes, exhibits a lake with wooded banks, and a temple in a flowery meadow where are grouped figures, in semi-classic draperies, supposed to represent the Muses and the Arts.

"An Affair of Honor" is the title given by

Émile Bayard to a singularly expressive and very Frenchy picture representing a duel with swords, on a heath near a group of pines, between two agile *cocottes* stripped to the waist, while a portly matron acts as umpire.

In the "Vengeance of Urban VI," Jean Paul Laurens shows the Pope, in his purple cape embroidered with gold, in a dungeon or chamber of torture, grimly gloating over the blood-stained bodies of the cardinals who had plotted against him (1384), which, clad in their red gowns, lie in a ghastly row against the wall.

Jean Jacques Henner's "Christ at the Tomb" exhibits a life-size corpse extended in a long, narrow, rocky niche, seen in profile and brought into ghastly relief by strong morning light. His "Weeping Nymph" is a nude damsel crouched at the entrance of a pine-grove, with her face hidden by her hands, her rosy-pink flesh in charming contrast to the blue of the evening sky.

One of the most popular pictures was Benjamin Constant's "Les Chérifas," a large and sumptuous canvas, displaying a wealth of velvets, satins, silks, and gold tissues, with the gleam of jewels and the flash of arms. In the interior of a magnificent harem, three nearly nude *odalisques* are just aroused from sleep by a black eunuch who has put aside the heavy curtain and admitted a flood of light. This picture went to the Museum of Carcassonne.

Paris: Miscellaneous.—Among the more important art events of the year was the exhibition in Paris of the collected works of Meissonier, embracing one hundred and forty-seven numbers, about two thirds of the pictures executed by him in the fifty years since his "Les Bourgeois Flamands" was shown at the *Salon* of 1834. Although some of the painter's best works were absent, notably the Stewart and Vanderbilt Meissoniers in New York, the collection was insured for 12,000,000 francs. The exhibition was for the benefit of "L'Hospitalité de Nuit," a charity much favored by Paris "society."

One of the greatest pictures of the year, and probably the one by which the artist will be longest remembered, is the "Christ on Calvary" of Munkacsy, exhibited in Paris and London. On an immense canvas, nineteen feet in height by twenty-five feet in length, is represented the moment of the Crucifixion when Christ has just expired, and the terror-stricken crowd are hastening from the scene. Against a sky black with clouds and illuminated with lightnings, Jerusalem being just discernible on the horizon, the three crosses stand out in bold relief in the foreground. The Virgin, Mary Magdalene, and John, are kneeling at the foot of the cross, beside which the centurion has dropped in terror. All the remainder of the canvas is filled with the departing spectators of the scene—Jewish men and women, the executioners with their implements, rabbis discussing the event, Roman cavalry, and in front Judas.

London: Royal Academy.—The one hundred and sixteenth exhibition of the Royal Academy of Arts opened, as usual, on the first Monday in May and closed on the first Monday in August. The works exhibited numbered 1,856, classified as follows: Oil-paintings, 1,076; water-colors, 273; architectural drawings, 143; engravings and etchings, 125; miniatures, 47; sculptures, 192. Among the most prominent works was Sir Frederick Leighton's "Cymon and Iphigenia," an illustration of the well-known story of Boccaccio, how love wrought so great a change in Cymon, a youth of Cyprus, at sight of the sleeping Iphigenia, as to change him from a boor into a most accomplished gentleman. Sir Frederick's Iphigenia is draped, and is therefore a better representation of the original than Sir Joshua Reynolds's nude maiden in Buckingham Palace. Cymon is standing at the right, gazing upon her with enraptured eyes as she lies sleeping in a grove. The same subject, treated by Rubens, is in the Vienna Museum. Sir Frederick Leighton's picture has been purchased by the London Fine Art Society for between £4,000 and £5,000.

W. Q. Orchardson's "Mariage de Convenance," another of the successful pictures of the year, is almost as cruel in its satire as one of Hogarth's creations. A married couple are seated at table, the husband prematurely old and *blasé*, the wife young and sensual, ill at ease in each other's society, while a deferential butler, who affects to see nothing, pours out wine for his master.

Alma-Tadema's principal canvas, "Hadrian in England," the largest he has painted, represents a supposed visit of the emperor to a Romano-British pottery. Hadrian, accompanied by Lucius Verus, the Empress Sabina, and her companion, Balbilla, are in a kind of gallery, beneath which, through an archway, are seen craftsmen at work. In the foreground, seen at half-length, is a slave carrying a tray loaded with specimens up the stair.

Of Millais's several pictures, the one called "An Idyll, 1745," represents a drummer-boy in the English uniform of the period playing the fife to an audience of three little girls, seated in a wood. The name of Millais, coupled with the solid statement that it has been sold for £5,000, entitles it to consideration.

Hubert Herkomer's picture, entitled "Pressing to the West," represents a scene in Castle Garden, New York, as it appeared to the artist's eyes when in the United States in 1883. It shows a long, boarded room, in which people of many nationalities are crowded together in the extreme of discomfort.

Briton Riviere's "King and his Satellites," one of his best works, shows a large lion, followed by a group of hungry jackals, symbolical, it is said, of Mr. Gladstone and his political assailants.

London: Grosvenor Gallery.—The Reynolds Exhibition at the Grosvenor Gallery in the winter of 1883–'84 was remarkable as bringing together about 200 of the works of the first President of the Royal Academy, more than ever shown collectively before, the nearest approach to it being the National Portrait Exhibition in 1867, which contained 155 Reynoldses. Such an opportunity was never before presented of studying London society of 1750–1790—from princes, nobles, and statesmen, down to actors, actresses, and professional beauties. Unfortunately, many of Sir Joshua's works are deteriorating through changes in color—his browns, especially, having become heavy and bituminous.

The spring exhibition of the Grosvenor Gallery (May 1 to July 31) comprised 432 works, of which 381 were paintings and 51 sculptures. The most important picture shown, and one of the best of the year, was Burne-Jones's "King Cophetua and the Beggar Maid," a canvas twelve feet high by nine wide. The subject is from the old ballad, preserved in "Percy's Reliques," which tells how the African king Cophetua fell in love with a beggar maid whom he chanced to meet, or perhaps from Tennyson's later version, "The Beggar Maid." The king, resplendent in armor and royal robes, is sitting on a step, at the feet of the beggar maid, Penelophon, who, clad in a simple robe of gray stuff and looking around wonderingly, is seated on the throne. Above, in a gallery, two chorister boys are making music.

London: Miscellaneous.—Another noteworthy picture, exhibited privately, is Edwin Long's "Anno Domini," a canvas eight feet high by sixteen feet wide, in which he has combined the "Flight into Egypt" with an imposing Egyptian pageant. In the foreground are the Virgin and Child riding upon an ass, beside which Joseph is walking. The background is filled by a grand procession of priests and attendants, bearing images of the gods, headed by girl minstrels, which, issuing from the portals of a temple, winds across the plain to the right side of the foreground. To the left of the Virgin, in the foreground, are several groups of figures—a little girl offering images for sale, a woman with a sick child in her lap, a negro with a tray of images, and a young man fastening a necklace around a girl's neck. The scene is lit by the after-glow of the sunset, which lingers on the temple and the pyramids in the distance.

The most notable acquisitions made by the National Gallery during the year are the pictures from the Blenheim collection—the Ansidei Madonna of Raphael, and the portrait of Charles I by Vandyke. The Madonna, for which £70,000 was paid, more money than ever before given for a single picture, was painted, according to Vasari, in 1505, but the date on the margin of the Virgin's mantle is 1506. It was first placed in the chapel of St. Nicholas of Bari, belonging to the Ansidei family, in San Fiorenzo, the Church of the Serviti, at Perugia, where it remained until 1764, when Lord Robert Spencer purchased it and presented it to his brother, the Duke of Marlborough. A well-executed copy, by Niccola Monti, was put in its place and still remains there. The picture, which is nine feet high by five wide, represents the Virgin on a high throne, with Jesus on her knees, both reading from a book; on the left stands John Baptist, and on the right Bishop Nicholas of Bari with crozier and book.

The Vandyke picture, twelve feet six inches high by nine feet six inches wide, represents Charles I in armor on a roan charger, attended by his equerry, Sir Thomas Morton, on foot, bearing his helmet. Formerly in the collection of Charles I, which was dispersed at his death, it was purchased in Munich by John, Duke of Marlborough, and is now acquired by the National Gallery for £17,500.

Of pictures sold in London during 1884 for 1,000 guineas each and upward, the following is a partial list: Lady Otho Fitzgerald sale (May 8–10), Landseer, "Monarch of the Glen," 6,200 guineas, to Mr. Eaton, M. P.; C. Stanfield, "Guarda Costa off Fuentarabia," 1,900 guineas, to Agnew; Thomas Faed, "Reading the Bible," 1,650 guineas, to Davis. A Turner, "Dunstanborough," which last sold for 2,200 guineas, brought only 900 guineas. Osmaston Hall sale (March 14), Murillo's "Magdalen," which formerly belonged to ex-Queen Isabella of Spain, was sold for 1,900 guineas.

Sale of E. C. Potter, Rusholme House, near Manchester (March 21–22): David Cox, "The Church at Bettws-y-Coed," generally considered his masterpiece, 2,550 guineas, to Agnew; do., "Skirts of the Forest," 1,350 guineas (Gillott sale, 1872, 2,205 guineas); J. C. Hook, "Wise Saws," 1,200 guineas, to White; Sir John Millais, "Vanessa" and "Stella," 1,300 guineas and 1,400 guineas respectively; Briton Riviere, "Let Sleeping Dogs Lie," 1,050 guineas, to Agnew; do., "Cupboard Love," 1,050 guineas; do., "Daniel" (Medal, Paris, 1878), 2,500 guineas, to Agnew; do., "Persepolis," 1,000 guineas, to Agnew; do., "All that was Left of the Homeward Bound," 1,100 guineas.

G. F. Lees's sale, Berry Hill Hall, Mansfield (April 26): Edouard Détaille, "Scots Guards returning from Exercise in Hyde Park," 1,070 guineas, to Agnew; H. W. B. Davis, "In Ross-shire," 1,200 guineas, to Agnew; Peter Graham, "Highland Drove," 1,300 guineas, to Agnew; Sir John Millais, "The Cuckoo," 1,900 guineas, to Heath; J. C. Hook, "Ill blows the Wind that benefits Nobody," 1,280 guineas.

Albert Levy sale (May 3): Rembrandt, "Portrait of the Artist" (1635, formerly owned by the Earl of Portarlington), 1,800 guineas, to M. Colnaghi. At this sale Jansen's (Ceulen) portrait of Milton at the age of ten was sold for 330 guineas to Passmore Edwards, M. P.

The Leigh Court sale, Sir Philip Miles, Bart., was one of the principal art events of the year, it being one of the most famous private collections in England. Among the treasures disposed of were the two well-known Altieri Claudes, "The Sacrifice to Apollo" (1668), and "The Landing of Æneas" (1675), bought by Agnew for 5,800 guineas and 3,800 respectively. They were purchased originally from Prince Altieri, Rome, by Mr. Fagan, were some time at Fonthill, and were afterward sold to Mr. Miles for £12,000. A third Claude, "Herdman driving Cattle through a River" (1670), also went to Agnew, for 1,950 guineas. Rubens's "Holy Family," "Woman taken in Adultery," and "Conversion of Saul" (eight feet by eleven feet), were bought in for the family, at 5,000 guineas, 1,700 guineas, and 3,300 guineas, respectively. Domenichino's "St. John in a Vision," for which Mr. Miles paid £10,000, and Titian's "Venus and Adonis," formerly in the collection of Benjamin West, were also bought in, at 900 guineas and 1,600 guineas; while Murillo's "Holy Family," formerly in the Hope collection, fell to Agnew, at 3,000 guineas. The National Gallery acquired T. Stothard's "Canterbury Pilgrims," 420 guineas; Giovanni Bellini's "Adoration of the Magi," 365 guineas; Poussin's "Calling of Abraham," 1,900 guineas; and Hogarth's "Polly Peachum," 800 guineas, and "The Shrimp Girl," 256 guineas. Sir Joshua Reynolds's "Simplicity" was sold privately for £3,760.

United States: Exhibitions.—The twenty-fourth annual exhibition of the Artists' Fund Society, at the National Academy, New York, which opened Jan. 5, contained 105 works, by 64 artists. The sales realized $13,902.

The second annual exhibition of the Art Institute, Chicago, which opened Jan. 12, consisted of 76 works, both American and foreign.

The twenty-ninth annual exhibition of the Boston Art Club opened Jan. 19, with 162 pictures, by 126 artists.

The American Water-Color Society and the New York Etching Club held a combined exhibition at the National Academy, New York (Feb. 4), at which 662 drawings, by 280 artists, were shown.

The fifty-ninth annual exhibition of the National Academy of Design (April 7 to May 17) contained 709 works, by 450 artists. The sales amounted to 108 pictures, for the aggregate sum of $36,525.

The Thomas B. Clarke prize of $300, offered for the best American figure composition painted in the United States, and shown at the exhibition, was awarded to Charles F. Ulrich, for his "In the Land of Promise." The three Hallgarten prizes, of $300, $200, and $100, for the three best oil pictures at the exhibition, were given, respectively, to Louis Moeller, for his "Puzzled"; C. Y. Turner, for the "Courtship of Miles Standish"; and William Bliss Baker, for his "Woodland Brook."

An exhibition of the works of George Inness, at the American Art Gallery, which opened April 11, contained 57 pictures, dated from 1857 to the present time, including his "Niagara."

The Memorial Exhibition of the works of the late George Fuller, at the Museum of Fine Arts, Boston (April 24 to May 13), consisted of 170 works, dating from 1847 to the time of his decease. At the auction-sale at the close, 54 pictures were disposed of for $17,470.

The art department of the Southern Exposition at Louisville, Ky. (Aug. 16 to Oct. 25), contained 472 works, 403 of which were by American artists.

The art department of the Cincinnati Exposition (Sept. 3 to Oct. 4) contained 588 works, of which 244 were by Americans.

The exhibition of the Pennsylvania Academy, in Philadelphia (Oct. 30 to Dec. 11), was successful.

The new galleries of the American Art Association were opened in New York, with an exhibition (Nov. 10 to Dec. 10) composed of works by American artists from the Paris *Salon* of 1884, supplemented by home talent.

The autumn exhibition of the National Academy of Design was held from Nov. 10 to Nov. 29.

The forty-ninth exhibition of the Brooklyn Art Association (Dec. 8–19) contained 290 oil-pictures, contributed by 178 artists.

A collection of works by the English painter, George Frederick Watts, was the chief feature at the winter exhibition of the Metropolitan Museum of New York, which opened Oct. 30. It comprised 52 oil-paintings (1854 to 1884), including 28 portraits; one water-color, and three photographs of paintings.

United States: Statues and Monuments.—A statue of Martin Luther, eleven and a half feet high, a replica of the central figure of the monument at Worms, by Reitschel, was unveiled, May 21, in front of the Lutheran Memorial Church, Washington.

A statue, by Augustus St. Gaudens, of Robert Richard Randall, founder of the Sailors' Snug Harbor, Staten Island, was unveiled in front of that institution on Decoration-day.

An equestrian statue of Gen. Simon Bolivar, by Rafael de la Cova, a gift from the Republic of Venezuela, was unveiled, June 17, in Central Park, New York.

A statue of the late Gov. Buckingham, of Connecticut, by Olin L. Warner, was unveiled, June 18, at Hartford.

A statue of Prof. Benjamin Silliman, the elder, by John F. Weir, was unveiled, June 24, at New Haven, Conn.

The Yorktown Monument, the joint work of J. Q. A. Ward, sculptor, and of Richard M. Hunt and Henry Van Brunt, architects, was unveiled on Oct. 19, the anniversary of the surrender of Cornwallis.

A soldiers' monument, by G. E. Bissell, of Poughkeepsie, was unveiled, Oct. 23, on the public green at Waterbury, Conn.

Larkin G. Mead's marble group, representing Columbus before Queen Isabella, presented by D. O. Mills to the State of California, at a cost of $30,000, has been placed in the rotunda of the Capitol at Sacramento.

The equestrian statue of Gen. John Fulton Reynolds (killed at Gettysburg), by John Rogers, was unveiled, Sept. 18, in front of the new Public Buildings, in Philadelphia. It was presented to the city by Joseph E. Temple.

An ideal statue of John Harvard, founder of Harvard College, by Daniel C. French, was unveiled, Oct. 15, at Cambridge, Mass.

The Monmouth Battle Monument, the joint work of E. T. Little and Douglass Smyth, architects, and James E. Kelly, sculptor, the corner-stone of which was laid in 1878, was dedicated, Nov. 13, at Freehold, N. J.

The Washington Monument, at Washington, the corner-stone of which was laid in 1848, was completed on Dec. 6, when the cap-stone was put in place. The total cost of the shaft has been $1,187,710.

A statue of Admiral Samuel Francis Dupont, by Launt Thompson, was unveiled, Dec. 20, at Washington.

Paris: Salon.—The exhibition (May 1 to June 30, 1885) comprised 5,034 numbers, classified as follows: Paintings, 2,488; cartoons, water-colors, pastels, porcelain pictures, etc., 783; sculpture, 1,067; engraving in medals and precious stones, 51; architecture, 188; engraving, 457. The medal of honor in the section of painting was awarded to Bouguereau. No first-class medal in painting was given. Of the 1,243 painters exhibiting, 389 were foreigners, of whom 98 were Americans, 47 Belgians, 34 English, and 31 Germans. The remainder were Spaniards, Swedes and Norwegians, Swiss, Portuguese, Dutch, Russians, Austrians, Italians, Greeks, and Turks.

Since 1880 the exhibitions of the *Salon*, which were formerly controlled by the Government, have been held under the management of the Society of French Artists. The receipts from entrances during the five years under the society's charge compare as follows: 1881, 314,302 francs; 1882, 343,874; 1883, 298,497; 1884, 289,293; 1885, 350,000.

A prominent place in the great room of the *Salon* is given to the work of Julius L. Stewart, son of the well-known American collector in Paris. His picture, entitled "The Hunt Ball," is an English scene, the dancers being principally portraits, including one of a celebrated American beauty. The uniforms of the huntsmen, the toilets of the ladies, and the brilliant light-effects, all contribute to its success. A wave-study, by Alexander Harrison, another American, has also, and deservedly, a prominent place.

Among the religious pictures, the diptych, painted by Bouguereau for the Church of St. Vincent de Paul, Paris, the "Adoration of the Magi," and the "Adoration of the Shepherds," exhibiting all the graces and all the defects of that prolific artist, was awarded the grand medal of honor.

"The Martyrdom of St. Denis," by Léon Bonnat, an immense picture, intended for the Pantheon, is a vigorous composition, with very little religious feeling, and even more startling in its realism than his famous "Christ on the Cross," in the Palais de Justice. The saint, who has just been decapitated at the foot of a long flight of steps leading to an enormous portico, on which lie two other headless, bleeding corpses, is represented as rising from his knees and stooping to pick up his own head, to the surprise of his executioner on the right, painted from a butcher of Paris, and a toga-clad Roman official on the left. Above, an angel is flying down with a wreath and the palm of martyrdom.

In the "Suffer Little Children to come unto Me," of Frederic Uhde, a German artist, this trite subject is treated in an original and very impressive manner. In a poorly furnished room children and peasants are grouped around a long-haired, ascetic-looking figure in a blue tunic, seated in a straight-backed chair. Although the head is undecorated with any of the conventional signs indicative of supernatural origin, the supreme tenderness of his face and of his gestures, and the profound attention accorded by all his listeners, give this representation a genuine sentiment far beyond that of the ordinary legendary type.

Another poetical and well-conceived picture is Luc Olivier Merson's "Arrival at Bethlehem," illustrating a popular Christmas carol. Joseph and the Virgin, arrived in Bethlehem at night, are represented in a narrow moonlit street before the door of the inn, the hostess of which, who appears at the open window, by an arrogant gesture bids them go around to the other door.

Albert Pierre Dawant's "Bark of St. Julian the Hospitaller," Alfred Henry Bramtot's "Departure of Tobias," and Cabanel's "Daughter of Jephthah," who stands on a hill-top surrounded by weeping maidens, are also among the noteworthy canvases dealing with religious subjects, although the last-named resembles rather a modern harem scene.

The largest picture (twenty-three feet high by thirty-three feet wide) in the *Salon* is Georges Clairin's "After the Victory," illustrative of the contest between the Moors and Christians in Spain. In the court-yard of a Moorish palace, surrounded by an arcade of white marble, a crowd of warriors and courtiers are assembled to present trophies of conquest to their king, who, clad in rich green robes, is mounted on a black charger. An immense heap of spoil is piled on the ground, in front of which three chieftains prostrate themselves before their sovereign. The foreground at the left is encumbered with corpses of Christian knights, each in armor as he died, and at the right are captive women crouching upon splendid carpets. It has been purchased by the state.

Benjamin Constant's "Justice of the Chérif," another episode of Moorish history, is also a very large picture, being more than thirty feet long. In a superb apartment, enriched with gold, marbles, splendid tissues and embroideries, and sparkling waters, lie the corpses of seven women on the marble step of a long gold-embroidered green dewan, from which they have been tumbled in a heap. At the foot of a black *portière* stand two slaves, and at the right the figure of a black warrior in armor is dimly seen.

Georges Rochegrosse's "La Jacquerie" is a piece of sensational melodrama, by no means as successful as his "Death of Astyanax" of 1883, to which was awarded the *Prix du Salon.* A mob of howling savages, most of them stained with blood, armed with scythes, pikes, and hammers, and carrying the seigneur's head on a hay-fork, have forced their way into a château, where they are confronted by the seigneur's mother, clad in purple velvet and ermine. Behind her, terror-stricken, are grouped on the floor the younger women and children.

François Flameng's "Marie Antoinette," one of the artist's last works, represents the unfortunate queen on her way to execution, surrounded by the howling crowd, on whom she gazes with haughty contempt. Among other historical pictures, Hippolyte Dominique Berteaux's "Attempt on the Life of Hoche," and Alexandre Bloch's "Defense of Rochfort-en-Terre in 1793," are worthy of notice. Albert Maignan exhibited the "Death of William the Conqueror"—a chamber in disorder, and a corpse lying deserted upon a bed, from the drapery of which it is scarcely distinguishable.

Perhaps the most popular picture of the *Salon* was Émile Bayard's "Bande Joyeuse," a Rabelaisian subject, representing a line of dancers of the Pantagruel company in quaint and gay attire, capering arm in arm. Frederick Bridgman's "Summer on the Bosporus" depicts a company of *odalisques* in a boat, enjoying its motion in a bright, sunny afternoon. Paul Albert Besnard's stupendous allegory entitled "Paris," a picture fifty feet long, intended for the mairie of the fourth arrondissement of Paris, is a remarkable example of decorative art. In the midst of flag-bedecked vessels on the Seine, with the panorama of the quays glittering with life and light, the bridges, the Isle St. Louis, the churches, and the monuments, stretching into the distance, passes the shallop of the city covered with flowers, bearing a standing female figure with two sleeping children in her arms.

The "Solum Patriæ" of Pierre Fritel, another huge decorative canvas, also attracted much attention. A vast host of spectral warriors, on horseback and on foot, appear like storm-clouds rushing over the abandoned glebe, where the plow lies idle, and the vista of a long valley is devoid of life. The banners of the ghostly riders exhibit the devices of France from the time of Charlemagne down to that of Napoleon, and among them are many who bore important parts in French history.

Of the pictures of the nude, the "Grande Piscine de Brousse" of Gérôme, which is larger than most of his canvases, is his chief work of the year. Within a large Romanesque building, the arcaded walls of which are fitted with seats in the recesses, is the bath, lighted by brilliant rays of sunlight from above, which illumines the forms of many bathers, nude and half-dressed, who sit on benches, swim, loiter with their feet in the water, or walk on clogs across the wide platform of colored marbles. Bouguereau's "Byblis," representing a nude figure bending in tears over a fountain, is a good example of his style. Henner's "Madeleine," where white flesh-painting is opposed to black drapery and yellow hair; Louis Courtat's "Bathers," two admirably painted female figures reclining on a sandy beach; Alfred Philippe Roll's "Étude," a woman playing with a bull in an open field; and Henri Auguste Janet's "La Dernière Coupe," a bacchante, are all striking examples of nude painting.

Among the animal pictures Richard Friese's "Brigands of the Desert" represents a lion and a lioness stealthily watching from a mountain-crest travelers encamped in the plain below. Aimé Morot's "Toro Colante," a bloody scene in the arena, where the maddened bull is goring a horse; Jules Jacques Veyressat's "Les Maquignons" and "Arab Cavaliers" are brilliant horse-pictures; Félix de Vuillefroy's "La Vente des Poulains" is a fine study of horses and market people in a meadow; and Joseph Melin's "Relais Volant" and "Talbot" are masterly dog-pictures. The cattle-pictures of MM. Barillot, Bonnefoy, Marais, Princeteau, and Julien Dupré are also worthy of mention.

Among notable landscapes are Guillemet's "Paris from Meudon," Normann's "Norwegian Fiord," C. H. Davis's "Evening Calm," Adolphe de Meckel's "Dead Sea at Sunset," Henry Bonnefoy's "Borders of the Lake," Ernest Bouché's "Low Tide," Victor Hareux's "Bords de la Creuse" and "Autumn Night," Michel de Wylic's "Souvenir of Brittany," Adrian Schulz's "November Evening," Alexandre Segé's "Vallée de la Sée," Jean Joseph Bellel's "Approach to Biskra," and Jean Henri Zuber's "September Pasturage."

Paris: Miscellaneous.—An official valuation of the works of art belonging to the city of Paris makes the aggregate amount 12,256,860 francs. This includes the statues in the streets and on public buildings, and pictures in the Hôtel de Ville and in the churches, but not the great national collections.

A portrait gallery of painters, after the example of the celebrated one in the Uffizi Gallery in Florence, has been begun at the Louvre.

Four pictures by Frans Hals, which have hung ever since they were painted in the hospital at Haarlem, founded by the Beresteyn family, have lately been sold, their original places being filled by copies by the Dutch artist Van Wijngaerdt. They are portraits of Nicolaas van Beresteyn, of his sister, of Emerance van Beresteyn, a child, and of his brother surrounded by his wife and family. The Emerance, the only good example of the master among the four, was acquired by the Baroness Wilhelm de Rothschild, of Frankfort, for 100,000 guilders (about $35,000). The other three were purchased for the Louvre for 50,000 guilders; and, as the pictures are in very bad condition, the sale has caused much comment.

A museum, to be in some respects like the London South Kensington Museum, is projected in Paris, to be built on the Quai d'Orsay. The committee expected to raise 14,000,000 francs by a lottery, but the net result is only 6,000,000 francs. Of this, 3,500,000 francs is appropriated to the building.

The sale of the works of the late Bastien-Lepage, May 11, produced 212,000 francs. Among them, "The Beggar" brought 21,000, "The Potato-Gatherers" 29,100, and the "Annunciation to the Shepherds" (2d Grand Prix de Rome, 1875), 23,800 francs. At the Comte de la Bérandière sale, Paris (May), Boucher's "Toilet of Venus" brought 133,000 francs. Greuze's "Jupiter and Danaë" was sold in Paris, June 2, for 30,000 francs. An exhibition of the works of Eugène Delacroix was held in Paris to raise funds to erect a monument to him.

London: Royal Academy.—The Royal Academy is composed (1885) of 73 members, divided as follows: Painters, 58; sculptors, 7; architects, 5; engravers, 3. The painters are thus classified: Genre, 41; portrait, 5; landscape, 9; animal, 3.

The one hundred and seventeenth annual exhibition contained 2,134 works, which shows a perceptible gain in number if not in quality, the exhibition of 1884 having consisted of 1,856 pictures, that of 1883 of 1,693, that of 1882 of 1,696, and that of 1881 of 1,571. The gain may be partly accounted for by the fact that three new rooms have been added, devoted to water-colors, black and white, and architectural designs.

Of the oil-pictures, W. Q. Orchardson's "Salon of Madame Récamier" occupies a prominent place. The hostess, seated at the right upon a sofa, is the center of a group whose attention is directed to her, including Canova—apparently the chief talker—Cuvier, Fouché, Delille, and Metternich, while at the other end of the *salon* a second group, including Lucien Bonaparte, Talleyrand, Brillat-Savarin, and Sieyès are gathered around Madame de Staël. Millais's "Ruling Passion," at first named by him "The Ornithologist," represents an old man, in cap and spectacles, a portrait of Mr. T. O. Barlow, the engraver, reclining on a couch, wrapped in blankets, descanting to an audience of eager children on the beauties of a gorgeous bird held in his weak hands. Almost as charming is the same painter's "Orphans," the nearly full-length figure of a little girl holding in her apron a young rabbit. It has been purchased for the art gallery of Sydney, Australia.

Alma-Tadema's "Reading from Homer" is even more realistic than his earlier works. Seated upon a marble bench on the terrace of a temple, beyond which the sky and the blue Mediterranean are visible, the reader, crowned with bay and partly clad in rose-color, is explaining to an audience of four the argument of the poem he is about to read from the papyrus lying in his lap. His listeners consist of a young girl with yellow daffodils in her hand, a man in a blue chiton by her side, with one hand in hers, the other on a lyre, another stretched at her feet on a goat-skin, and a fourth standing in the shadow of the portico. A mass of flowers lying upon the bench give a strong accent of red to the picture.

Edward J. Poynter's "Diadumene," a nearly life-size nude figure, standing in bright light on the step leading to a bath, is an enlarged version, with altered details, of an earlier picture. She is binding a fillet of golden silk about her chestnut-colored tresses, in the same attitude as the famous statue of the Diadumenos of Plycleitus, from which she derives her name. The sumptuously painted mosaic columns, marble moldings, and other decorations of the apartment behind her, which is open to the sea on one side, make a fitting background to her almost sculpturesque figure.

John Collier's "Circe" is a nude study, showing the enchantress seated on the grass in a wood with her back to the spectator and her arm around a tiger lying beside her, while another lies crouched at her feet, and a third is in the distance.

P. H. Calderon's "Andromeda" exhibits her draped below the waist, standing against a cliff, to which she is chained by both hands, with a thick mass of dark hair behind her white body blown by the same wind which dashes the spray against the rocks.

"After the Arena," by Edward Armitage, is a large and ambitious picture, more than twelve feet high, representing a scene in the Roman catacombs, where the corpse of a youth slain in the arena is being lowered through an opening in the arch above to the care of the victim's friends.

John Pettie's "Challenged" is a dramatic picture showing a young gentleman who, roused from his bed after a night's excess, has slipped on a blue satin dressing-gown and white satin breeches to receive a challenge from a visitor who is departing through the open doorway.

William F. Yeames's "Prisoners of War" represents two young English midshipmen, in Napoleon's time, in charge of a grim sentinel, seated on some casks on the quay of a French port, exposed to the good-natured comments of a crowd of fishermen, their wives and daughters.

Briton Riviere's "Væ Victis," a struggle between a wolf and an eagle for the carcass of a lamb, is not so interesting as his "After Naseby," a large room lighted by a lofty window, occupied only by a lady reading a letter, and two small spaniels.

George H. Boughton's "Milton visited by Andrew Marvell," though not one of his best efforts, is attractive. The blind poet is seated in the porch of his house in Bunhill Fields, with his third wife, Elizabeth Minshull, beside him. Marvell, attended by two or three other figures, is bending forward to speak, as he takes his hand.

"John Knox at Holyrood" is the title of W. P. Frith's contribution. The great reformer, after leaving Queen Mary, seen through an open doorway, in rage and tears at his reproaches, pauses in passing through the antechamber to administer a rebuke to the gay gallants and ladies who are indulging in the old-time game of kiss-in-the-ring.

Luke Fildes's "Venetians" is a composition in the same manner as his picture of 1884—a scene on the steps of a canal, with women and children prettily grouped.

J. W. Waterhouse's "St. Eulalia" exhibits the body of the martyr lying on the pavement in the forum, the limbs partly covered by a purplish-red drapery. The miraculous snowstorm, sent to shield the saint from irreverent gaze, has slightly whitened the ground, while a wintry gust blows the mantles of the men and women, who in the distance kneel, or crowd up the steps to gaze.

London: Grosvenor Gallery.—The Gainsborough Exhibition at the Grosvenor Gallery in the winter of 1884–'85 included two hundred and sixteen pictures in all, or about the same number as the Reynoldses shown the preceding winter, and comprised both portraits and landscapes. Among the former were the famous "Blue Boy," lent by the Duke of Westminster; "Lady Sheffield," by Sir Robert Sheffield, Bart.; and the "Duchess of Devonshire," by Earl Spencer; and among the landscape and figure pieces, the "Cottage Door," lent by the Duke of Westminster; the "Harvest-Wagon," by Lord Tweedmouth; the "Market-Cart," by Lord Bateman; and the "Cottage Girl," by G. L. Basset, Esq.

At the spring exhibition of the Grosvenor Gallery, one of the best pictures was W. B. Richmond's "Audience in Athens during the Representation of the Agamemnon," a large canvas about seven feet high by ten wide. The scene is laid in the theatre at Athens, the spectator being supposed to stand on the stage and look out upon the audience, who sit in three rows of seats, under the shade of the velarium, the archon in the center, and the chief men on his right and left. Above the cavea, between the marble columns of the colonnade, are caught glimpses of the Acropolis and its temples, the fanes of Theseus and Bacchus, and cypresses and pines against the summer sky. It has been purchased for the Birmingham Art Gallery.

George F. Watts's allegorical picture, "Love and Life," is a replica of the picture exhibited at the Metropolitan Museum in New York in 1884–'85, and a companion to the "Love and Death" of the same exhibition, shown at the Grosvenor Gallery in 1877. Love, a winged youth, is leading Life, a young girl, nude, up the steep path of a rocky precipice, shading her form from the hot rays of the sun with his half-extended wings.

"The Mirror," by C. E. Hallé, illustrating the invention of the looking-glass, represents a youth holding up a steel mirror before a girl in white and pink, who, by its aid, is binding ivy in her hair.

"Hypatia," an ambitious canvas by C. W. Mitchell, some eight by five feet, exhibits Charles Kingsley's heroine, entirely nude, save her "golden locks" around her, before the high altar in the church, whither her tormentors have pursued her, with her arm raised, "appealing from man to God."

Philip R. Morris's "Eve's Second Paradise" shows the happy mother of mankind, half-length, nude, in a flowery dell, bending over two sleeping infants.

"Freedom," an allegorical picture, by Walter Crane, represents a winged figure releasing Humanity, a prisoner bound on the floor of a prison, from political and spiritual tyranny, symbolized by a soldier and a priest, who have fallen asleep while sitting as guards, one on each side of the captive.

London: Miscellaneous.—Holman Hunt's great picture, "The Triumph of the Innocents," on which he has worked ten years, was put on exhibition at the rooms of the Fine Art Society in March. It is properly a Flight into Egypt, as it represents the journey of the Holy Family after the persecution of Herod. The time is twilight, the scene a broad plain with beacon-fires in the extreme background. In the foreground Joseph, trudging wearily with the tools of his craft on his back, and with his face turned toward the fires, which may indicate pursuit, leads by a halter the ass bearing the Virgin and Child, which is followed by a foal. Preceding, attending, and following the Holy Family are the glorified forms of many little children, each irradiated like a seraph and crowned with a diadem of light, while all are bound in a line by garlands, forming a resplendent company which the child recognizes with glee. These children are said to be the "most gloriously beautiful in art."

Gainsborough's half-length seated portrait of "Sophia, Daughter of John Boldero and Wife of Thomas Hibbert," painted about 1784, and exhibited at the winter exhibition of the Royal Academy, was sold in June to Baron Alphonse de Rothschild for 10,000 guineas.

The Beckett-Denison collection, sold on June 6 and the following days, realized but poor prices. Rubens's "Daniel in the Lions' Den," purchased at the Hamilton sale for 4,900 guineas, was bought back by the Duke of Hamilton for £2,100. Venusti's "Christ driving out the Money-Changers," which cost Mr. Denison £1,680, was sold for £640; and Rubens's "Birth of Venus," or "Acis and Galatea," for which he paid 1,600 guineas, for 640 guineas, both being acquired by the National Gallery. Bronzino's interesting "Portrait of Don Garcia de Medici" was sold for £945, Turner's "Departure of Adonis for the Chase" for £1,522, and Vandyke's "Duchess of Richmond and Son" (cost 1,950 guineas) for 842 guineas.

The most notable sale of the year was that of the "Three Graces," by Raphael, from the Earl Dudley collection to the Duc d'Aumale, for £25,000, a price which, taking into consideration the size of the picture (6¾ inches high by 4¾ wide), is even greater than that paid by the English Government for the "Ansideé Madonna." It is one of Raphael's early works, having been painted at Perugia, in 1504–'5, and was probably suggested by the antique marble group in the Opera del Duomo, Siena. It will henceforth find a home with the duc's magnificent collection at Chantilly.

Antwerp Exposition.—The International Exhibition at Antwerp, opened in May, 1885, had a fine art collection, to which artists of all countries were invited to contribute. The works exhibited were classified as follows: Belgium, 689; France, 681; Italy, 287; Germany, 274; Netherlands, 244; Austria, 195; England, 116; Norway, 100; Russia, 36; Switzerland, 29; Spain, 23; Sweden, 20. An extraordinary medal of honor for painting was awarded to Alfred Stevens; medals of honor to Sir Frederick Leighton, Léon Bonnat, Luc Olivier Merson, and Léon Comerre; first-class medals to George F. Watts, and MM. Glaize, Leblant, and Schommer; and second-class medals to Georges Bertrand, Lucien Gros, and Philip R. Morris.

Berlin Museum.—The Berlin Museum has acquired the so-called Holzschuher Dürer, a portrait of Dürer's friend Jerom Holzschuher, one of the septemvirs of Nuremberg, from the Germanisches Museum at Nuremberg, to which it was lent by the descendants of Holzschuher himself. It is on panel, is in good preservation, and is still in its original frame or case, with the arms of Holzschuher on the lid. Painted in 1526, it is probably the last picture on which Dürer worked. The price originally announced, a million marks, is now said to have been 350,000 marks ($85,000), certainly a liberal sum to expend on a small panel, even if by Albrecht Dürer; but it is said that larger offers from private collectors were refused. Another acquisition of the Berlin Museum is the famous "Last Judgment" of Fra Angelico, formerly in the Fesch Gallery, and long in the collection of the Earl of Dudley. For this work, of which there are several replicas, £10,500 is said to have been paid. The Berlin Museum is also reported to have acquired from the Blenheim collection the celebrated "Fornarina" of Sebastian del Piombo, and the "Perseus and Andromeda" and "Triumph of Silenus" of Rubens.

Amsterdam Museum.—One of the most important art events of the year was the opening at Amsterdam, on July 13, of the Dutch National Museum of Fine Arts, in which a permanent home has been provided for all the precious art treasures of the Netherlands, hitherto scattered in many collections. The building itself, a splendid example of Flemish Renaissance style, the work of the well-known architect Josef Cuypers, was begun in 1876, and has cost about two million guilders. Independent of its art treasures, the extreme beauty of this building, especially of its internal decorations, places it in advance of all other European art galleries.

Within its walls are united many rare collections, among them those of the Hôtel de Ville of Amsterdam, the Van der Hoop Museum, the Netherlands Museum at the Hague, the Haarlem Pavilion, and the Royal Cabinet of Drawings. All schools are represented, and the decorations of the *salons* are in each case of the same period as the pictures hung on the walls. Many of the masterpieces of the Dutch and Flemish schools are here collected for the first time, among the Rembrandts being the famous "Sortie of the Banning Cock Company," commonly miscalled the "Night Watch," and the scarcely less celebrated "Lesson in Anatomy." In addition to the great public collections, many private collections have also been gathered into this incomparable museum, their owners having had the public spirit to place their treasures at the disposal of the state. The new catalogue comprises 773 old and 231 modern pictures.

The museum is not intended to be simply a place for the exhibition of pictures and statuary, but is to embrace also schools of the industrial arts and of drawing, in many respects like those of the South Kensington Museum in London. These departments are to be under the management of Director M. Obreen. Its fine-art library, one of the best in Europe, is the property of Dr. Alferdingk Thym, Professor of Æsthetics in the Royal Academy of Fine Arts, who has united with others to make this repository of art and culture one of the finest, if not the finest, in the world.

United States: Exhibitions, etc.—The great art museums of the United States are all of recent origin. Three—the Corcoran Gallery in Washington, the Metropolitan Museum in New York, and the Museum of Fine Arts in Boston—were chartered in 1870; the Pennsylvania Museum, in Philadelphia, was incorporated in 1876, the Museum of Fine Arts in St. Louis in 1881, the Cincinnati and the Milwaukee Art Museums in 1882, and the Detroit Art Museum in 1885. In 1885 H. B. Hurlburt, of Cleveland, O., left by will his art collection to the city, together with money to build an art museum.

The twenty-fifth annual exhibition of the Artists' Fund Society of New York was held, Jan. 3 to 14, at the National Academy. The sales amounted to $12,216 for 133 works.

The thirty-first exhibition of the Boston Art Club was held Jan. 16 to Feb. 14, and contained 153 works in oil by 114 artists. Of the exhibitors, 48 were from New York, 40 from Boston, and the remainder mostly from other towns in Massachusetts.

At the Prize Fund Exhibition, held in New York by the American Art Association in April, the four prizes of $2,500 each were awarded to the following: R. Swain Gifford, "Near the Coast"; Frank M. Boggs, "Entrance to Harbor of Honfleur"; Alexander Harrison, "Le Crépuscule"; Henry Mosler, "Last Sacrament." The four pictures were allotted respectively, by vote of the artists, to the Metropolitan Museum of New York, the Museum of Fine Arts of Boston, the Art Museum of St. Louis, and the Gallery of the Polytechnic Institute of Louisville.

The National Academy of Design in New York consists of 97 academicians and 57 associates, the number of each being limited to 100 members. The sixtieth annual exhibition (April 6 to May 16) contained 665 works, contributed by 432 artists. The Clarke prize of $300 was awarded to Francis C. Jones for his picture entitled "Exchanging Confidences," representing an old woman and a child seated at the tea-table. The three Hallgarten prizes of $300, $200, and $100 were given respectively to Harry Chase, for his "New York Harbor, North River"; J. Francis Murphy, for "Tints of a Vanished Past," a landscape; and Dennis M. Bunker, for "A Bohemian," a young artist playing the guitar.

The Boston Art Club's thirty-second exhibition (April 11 to May 2) contained 233 works by 128 contributors.

The Nashville Art Association's first annual exhibition (March 31 to April 27) was a success.

The San Francisco Art Association held its spring exhibition in April, with 114 oil-paintings, 39 water-colors, and other works.

The Boston Museum of Fine Arts held its fifth annual exhibition of contemporary American art (May 5 to June 2) with 212 works, of which 186 were oils, 11 water-colors, 2 pastels, and 13 pieces of sculpture.

The art exhibition of the Southern Exposition, Louisville, Ky., opened on Aug. 15 with 419 pictures by American artists, of which 55 were water-colors.

At the thirteenth annual exhibition of the Interstate Industrial Exposition of Chicago (Sept. 2 to Oct. 17), the art exhibit comprised 431 pictures, including 327 in oils and 104 in water-colors and pastels.

The art department of the St. Louis Exposition (Sept. 9 to Oct. 24) comprised 395 works, including Louis Beroud's great canvas (thirty feet by forty feet), "Henry III at Venice," from the *Salon* of 1885, and about forty other important foreign pictures.

The Milwaukee Exposition (Sept. 2 to Oct. 17) exhibited 652 works by 221 American artists; 291 were oil-pictures, and 361 water-colors, pastels, and black and whites.

The Pennsylvania Academy of Fine Arts held its fifty-sixth annual exhibition in Philadelphia from Oct. 29 to Dec. 10.

The autumn exhibition of the National Academy of Design, New York, held in November, contained 686 works by 424 artists.

The sale of the art collection of George I. Seney, of Brooklyn, took place in New York on the evenings of March 31 and April 1 and 2. The 285 pictures, which are estimated to have cost the owner $500,000, sold in the aggregate for $406,910, from which the expenses of the sale have to be deducted. Some of the highest prices obtained were as follows: Breton, "Evening at Finisterre," $18,200; Rousseau, "Morning on the Oise," $12,500; Defregger, "Arrival at the Ball," $10,500; Rousseau, landscape, $10,000; Bouguereau, "Vierge aux Anges," $9,500; Domingo, "Spanish Café," $8,100; Renouf, "Helping Hand," $7.600; Munkacsy, "In the Studio," $7,100; Van Marcke, "La Vanne," $7,000; Munkacsy, "Bringing in the Night Rovers," $6,250; Diaz, "Forest of Fontainebleau," $6,000; Knaus, "In the Hay-field," $5,500.

United States: Statues and Monuments.—The memorial monument erected in Mount Vernon Place, Baltimore, by William T. Walters, as a tribute to the genius of the French sculptor Antoine Louis Barye, was informally presented to the city on the 28th of January. It consists of a collective group of replicas of five of the artist's principal works in bronze on a granite pedestal.

Bartholdi's statue of "Liberty Enlightening the World" arrived in New York, June 17, on the steamer "Isère." The $100,000 needed to complete the pedestal was raised through the efforts of the New York "World."

Happersberger's statue of Garfield, for San Francisco, was cast successfully at Nuremberg, Germany.

Richard H. Park's Poe memorial was unveiled, May 4, in the Metropolitan Museum, New York.

J. Q. A. Ward's statue of the "Pilgrim," erected in Central Park, New York, by the New England Society, was unveiled on June 6.

William G. Turner's statue of Commodore Oliver Hazard Perry was unveiled at Newport, R. I., Sept. 10.

J. Q. A. Ward's statue of the late William Earl Dodge, at the intersection of Broadway and Sixth Avenue, New York, was unveiled Oct. 22. The pedestal, a fountan, was designed by Richard M. Hunt.

FLORIDA. State Government.—The following were the State officers during the year: Governor, Edward A. Perry, Democrat; Lieutenant-Governor, Milton H. Mabry; Secretary of

State, John L. Crawford; Comptroller, William D. Barnes; Treasurer, Edward S. Crill; Attorney-General, C. M. Cooper; Superintendent of Public Instruction, Albert J. Russell; Commissioner of Lands and Immigration, C. L. Mitchell. Judiciary, Supreme Court: Chief-Justice, George G. McWhorter; Associate Justices, George P. Raney and R. B. Van Valkenburgh.

Legislative Session.—The Legislature met on Jan. 6, and adjourned on Feb. 12. Wilkinson Call, Democrat, was re-elected United States Senator. The following are the chief acts of the session:

To provide for the assessment and collection of taxes on railroads and the properties thereof for the years 1879, 1880, and 1881, as to which there was no assessment.

To enforce the assessment and collection of taxes on certain lands granted to the St. John's Railway Company.

In relation to the apportionment of the one-mill State tax for school purposes.

To prescribe the duties of the Treasurer of the State.

To provide for the issue of bonds in exchange for the bonds of the State of Florida belonging to the common-school fund, seminary fund, and Agricultural College fund of the State.

A deficiency appropriation bill for the year 1884, granting $23,725.83.

The general appropriation bill for 1885 and 1886.

To provide an annuity for disabled soldiers and sailors of the State of Florida.

To provide for the taking of the census of the State in 1885.

Appropriating $35,000 for the expenses of the Constitutional Convention.

To provide for the management of the State Asylum for Indigent Lunatics.

To allow parties to testify in divorce suits.

To provide for the introduction in evidence of conveyances and certified copies of conveyances acknowledged or proved and recorded.

To determine the priority of deeds and other instruments of record.

To provide a general law for the adoption of children.

To authorize railroad and canal companies of the State to condemn private property.

To regulate the admission of foreign and domestic surety companies to do business in the State.

To provide for the appointment of boards of health in and for the several counties of the State.

To provide for the levying of a tax in cities and towns for water-works and fire-protection.

To dissolve insolvent municipal incorporations, and to provide provisional governments for the same.

To prevent excessive rates of tariff over any telegraph or cable company within the State.

A mechanics' lien law.

To require carriers in the State to receive, convey, and deliver freight as agreed upon with shippers.

To give laborers engaged in unloading vessels a first lien on such vessels for their wages.

Regulating the sale of beef under certain circumstances.

To define what are food-fish, and for the further protection thereof.

For the protection of oysters.

To fix the liability of owners or operators of log-drives or ditches in certain cases.

To punish the carrying of concealed weapons.

Authorizing the Governor to appoint a committee to investigate and ascertain what quantity of land the Atlantic and Gulf Canal and Okeechobee Land Company has reclaimed.

For the incorporation of presbyteries in the State.

An act recognizing the Florida University at Tallahassee as the University of the State.

A State tax of four mills on the dollar is levied for each of the years 1885 and 1886, with power in the Governor to reduce the rate if practicable. The counties, for their purposes (with certain exceptions), may levy not more than six mills on a dollar, provided that they shall levy not more than five nor less than two and a half mills on the dollar for schools.

The act for calling a Constitutional Convention provided that it should meet at Tallahassee, on the second Tuesday of June, and consist of 108 members, apportioned as members of the Legislature are, to be chosen on the first Tuesday of May.

Constitution.—Members of the convention were elected, pursuant to the act, on May 5. They were classified as follows: Democrats, 83; Republicans, 22; Independents, 2; Independent Democrat, 1. Seven were colored men. The convention met on June 9 and adjourned on Aug. 3, having framed a Constitution, the main features of which are given below. The Legislature is to consist of not more than thirty-two Senators, elected by districts for four years (one half being chosen biennially), and not more than sixty-eight Representatives, elected for two years. The Representatives are to be apportioned among the counties according to population, but each county shall have at least one, and no county more than three.

The regular sessions of the Legislature shall be held biennially, commencing on the first Tuesday after the first Monday in April, A. D. 1887, and on the corresponding day of every second year thereafter, but the Governor may convene the same in extra session by his proclamation. Regular sessions of the Legislature may extend to sixty days, but no special session convened by the Governor shall exceed twenty days.

The pay of members of the Senate and House of Representatives shall not exceed six dollars a day, and mileage not to exceed ten cents a mile each way.

No Senator or member of the House of Representatives shall, during the time for which he was elected, be appointed or elected to any civil office under the Constitution of this State, that has been created, or the emoluments whereof shall have been increased, during such time.

No person holding a lucrative office or appointment under the United States or this State shall be eligible to a seat in the Legislature.

Each law enacted in the Legislature shall embrace but one subject, and matter properly connected therewith, which subject shall be briefly expressed in the title; and no law shall be amended or revised by reference to its title only; but in such case the act, as revised, or section, as amended, shall be re-enacted and published at length.

The Legislature shall not pass special or local laws in any of the following enumerated cases: that is to say, regulating the jurisdiction and duties of any class of officers, except municipal officers, or for the punishment of crime or misdemeanor; regulating the practice of courts of justice, except municipal courts; providing for changing venue of civil and criminal cases; granting divorces; changing the names of persons; vacating roads; summoning and empaneling grand and petit juries, and providing for their compensation; for the assessment and collection of taxes for State and county purposes; for opening and conducting elections for State and county officers, and for designating the places of voting; for the sale of real estate belonging to minors, estates of decedents, and of persons laboring under legal disabilities; regulating the fees of officers of the State and county; giving effect to informal or invalid deeds or wills; legitimizing children; providing for the adoption of children; relieving minors from legal disabilities; and for the establishment of ferries.

No local or special bill shall be passed, unless notice of the intention to apply therefor shall have been published in the locality where the matter or thing to be affected may be situated, which notice shall state the substance of the contemplated law, and shall be published at least sixty days prior to the introduction into the Legislature of such bill, and in the manner to be provided by law.

Lotteries are prohibited in this State.

The Legislature shall establish a uniform system of county and municipal government, which shall be applicable, except in cases where local or special laws are provided by the Legislature that may be inconsistent therewith.

The Legislature shall provide by general law for incorporating such educational, agricultural, mechanical, mining, and other useful companies or associations as may be deemed necessary.

Laws shall be passed regulating elections, and prohibiting, under adequate penalties, all undue influence thereon from power, bribery, tumult, or other improper practice.

The Legislature shall provide for the election by the people or appointment by the Governor of all State and county officers not otherwise provided for by this Constitution, and fix by law their duties and compensation.

The Governor's veto may be overcome by a two-third vote of each house. The Governor is to be elected for four years. He may veto separate items of an appropriation bill. There is to be no Lieutenant-Governor. A Secretary of State, Attorney-General, Comptroller, Treasurer, Superintendent of Public Instruction, and Commissioner of Agriculture, are to be elected for four years. The salary of the Governor is fixed at $3,500 a year; of the Comptroller and Treasurer, at $2,000 each; and of the other officials named, at $1,500 each. These may be increased or diminished by the Legislature after eight years from the adoption of the Constitution. The judicial power is vested in a Supreme Court, Circuit Courts, criminal courts, county courts, county judges, and justices of the peace. The Supreme Court has appellate and supervisory jurisdiction, and consists of three justices elected for six years, one being chosen every two years. Seven Circuit judges (one for each Circuit) are to be appointed by the Governor, and confirmed by the Senate, for six years. The Circuit Courts are the tribunals of general original jurisdiction. County judges are elected for four years. Under certain conditions, there may be established in any county a criminal court of record, held by a judge appointed by the Governor and Senate for four years. The justices of the Supreme Court receive a salary of $3,000 a year, and the Circuit judges of $2,500. General elections are biennial in even years.

Every male person of the age of twenty-one years and upward, that shall, at the time of registration, be a citizen of the United States, or that shall have declared his intention to become such in conformity to the laws of the United States, and that shall have resided and had his habitation, domicile, home, and place of permanent abode in Florida for one year, and in the county for six months, shall, in such county, be deemed a qualified elector at all elections under this Constitution.

The Legislature, at its first session after the ratification of this Constitution, shall provide by law for the registration of all the legally qualified voters in each county, and for the returns of elections; and shall also provide that after the completion, from time to time, of such registration, no person not duly registered according to law shall be allowed to vote. The Legislature may make the payment of a capitation-tax a prerequisite for voting.

The Legislature shall have power to provide for issuing State bonds only for the purpose of repelling invasion or suppressing insurrection, or for the purpose of redeeming or refunding bonds already issued, at a lower rate of interest.

No tax shall be levied for the benefit of any chartered company of the State, nor for paying interest on any bonds issued by such chartered companies, or by counties, or by corporations, for the above-mentioned purpose.

The credit of the State shall not be pledged or loaned to any individual, company, corporation, or association; nor shall the State become a joint owner or stockholder in any company, association, or corporation. The Legislature shall not authorize any county, city, borough, township, or incorporated district, to become a stockholder in any company, association, or corporation, or to obtain or appropriate money for, or to loan its credit to, any corporation, association, institution, or individual.

Married women are secured in their rights of property. A system of free public schools is provided for. The principal of the State school fund is to be invested, and the income used for the support of schools. There is to be an annual State tax of one mill on the dollar for school purposes, and a county tax of from three to five mills on the dollar. Counties may be divided into school districts, and the taxpayers thereof may levy a district tax of not exceeding three mills on the dollar. Not more than two normal schools shall be established. The schools for white and colored children are to be separate. Marriage between white and colored persons is forbidden.

The property of all corporations, except the property of a corporation which shall construct a ship or barge canal across the Peninsula of Florida, if the Legislature should so enact, whether heretofore or hereafter incorporated, shall be subject to taxation unless such property be held and used exclusively for religious, scientific, municipal, educational, literary, or charitable purposes.

The Legislature is invested with full power to pass laws for the correction of abuses and to prevent unjust discrimination and excessive charges by persons and corporations engaged as common carriers in transporting persons and property, or performing other services of a public nature; and shall provide for enforcing such laws by adequate penalties or forfeitures.

No railroad or other transportation company or common carrier in this State shall grant a free pass, or discount the fare paid by the public generally, to any member of the Legislature, or to any salaried officer of this State, and the Legislature shall prohibit the granting or receiving such free pass, or fare at a discount, by suitable penalties.

Amendments to the Constitution must be proposed by three fifths of each house, and ratified by the people at a general election. If two thirds of each house propose, and the people at a general election approve, a Constitutional Convention may be held. This proposed Constitution is to be submitted to the people on the first Tuesday after the first Monday in 1886, which is the day of the general election. The following article is to be submitted to a separate vote:

> The Board of County Commissioners of each county in the State, not oftener than once in every two years, upon the application of one fourth of the registered voters of any county, shall call and provide for an election in the county in which application is made, to decide whether the sale of intoxicating liquors, wines, or beer shall be prohibited therein, the question to be determined by a majority vote of those voting at the election called under this section, which election shall be conducted in the manner prescribed by law for holding general elections: *Provided*, That intoxicating liquors, either spirituous, vinous, or malt, shall not be sold in any election district in which a majority vote was cast against the same at the said election. Elections under this section shall be held within sixty days from the time of presenting said application; but if any such election should thereby take place within sixty days of any State or national election, it shall be held within sixty days after any such State or national election.
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> The Legislature shall provide necessary laws to carry out and enforce the provisions of this article.

Population.—The following table gives some of the results of the census of 1885:

COUNTIES.	Inhabitants.	Farms.	Manufactories.	Deaths for year ending June 1, 1885.
Alachua	26,255	876	180	120
Baker	2,895	180	2	16
Bradford	6,815	551	....	84
Brevard	2,376	454	6	20
Calhoun	2,094	225	....	13
Clay	4,317	174	....	36
Columbia	11,187	923	....	97
Dade	332	22	....	....
Duval	21,955	948	35	222
Escambia	17,050	19	14	147
Franklin	2,297	9	9	84
Gadsden	11.406	995	....	122
Hamilton	7,255	906	7	59
Hernando	7,173	546	....	35
Hillsborough	8,285	534	24	65
Holmes	3,223	849	5	16
Jackson	16,728	1,186	6	58
Jefferson	15,573	758	17	130
Lafayette	4.030	200	21	....
Leon	17,447	174	......	129
Levy	6,678	484	8	60
Liberty	1,325	132	10	16
Madison	14,697	1,758	....	233
Manatee	5,484	484	5	22
Marion	17,365	1,522	7	45
Monroe	15,040	160	98	325
Nassau	8,619	206	10	88
Orange	15,425	1,252	47	107
Polk	6,623	553	18	86
Putnam	9,570	201	18	98
St. John's	5,714	81	4	43
Santa Rosa	7,432	122	....	81
Sumter	9,427	954	23	146
Suwannee	8,876	620	9	57
Taylor	2,182	216	....	49
Volusia	6,667	50	4	48
Wakulla	2,896	200	... ...	37
Walton	4,747	288	....	19
Washington	5,089	260	9	14
Total	342,551	19,572	596	2,777

The population in 1880 was 269,493, a gain in five years of 73,058, or about 24 per cent.

FRANCE, a republic in western Europe. The republic was proclaimed Sept. 4, 1870. The Constitution was adopted Feb. 25, 1875, by the National Assembly elected in 1871. The electoral laws were altered in 1884 and 1885. The Chamber of Deputies is elected by universal suffrage under the *scrutin d'arrondissement*, which was adopted Nov. 11, 1875. Each arrondissement is represented by a deputy, and; if its population is in excess of 100,000, by additional deputies for each 100,000 or part of 100,000 beyond that number. The number of electors in 1881 was 10,179,345. The number of deputies is 557. The Senate is composed of 300 members, 75 of whom were chosen for life, the Senate electing the successors of deceased members. The Senate bill of 1884 provides that vacancies in the life-senatorships occurring in the future shall be filled with senators elected by the departments for the ordinary term of nine years. The remaining 225 are elected, 75 every three years, by the departments and provinces. They are chosen by senatorial electors, elected to represent each of the communes and municipalities, together with the members of the Council General and the deputies of the department, who possess votes *ex officio*. As the life senatorships expire, the other 75 seats will gradually be distributed among the departments proportionately to the population. The act of 1884 disqualified all princes of deposed dynasties from sitting in the Senate. The Chamber of Deputies is elected for four years. The National Assembly meets annually on the second Tuesday in January, and must remain in session five months. The President of the Republic can call an extraordinary session, and is compelled to do so if one half of the members of each chamber unite in demanding it. The two chambers possess equal and concurrent powers of legislation; but all financial measures must originate in the Chamber of Deputies. The members of both houses receive pay, senators 15,000, and deputies 9,000 francs per annum. The executive head of the republic is the President, who is elected for the term of seven years by a majority of the deputies and senators in joint session. The President has the disposal of the military forces, makes all appointments, civil and military, and can propose legislation; but all acts must be countersigned by the ministers, who are appointed by the President and are responsible to the chambers. The President of the Republic is François P. Jules Grévy, born in 1813, President of the Chamber of Deputies from 1876 to 1879; elected Jan. 30, 1879.

Area and Population.—In 1866 the area of France was 209,580 square miles, and the population 38,067,064. In 1872, after the cession of Alsace and Lorraine to Germany in the treaty of May 10, 1871, the area was 204,177 square miles, and the population 36,102,921. In 1876 the population had increased to 36,905,788, and in 1881 to 37,672,048. The population present at the time of the census of

Dec. 31, 1881, was 37,405,290, comprising 18,656,518 males and 18,748,772 females. There were 10,399,885 families, an average of 3½ persons in each family. The number of dwelling-houses was 7,609,464, the number of individual dwellings 10,720,826. Of the inhabitants of Brittany 1,230,000 are estimated to speak the Breton tongue. In the Pyrenees there are 116,000 Basques, and in Corsica and Nice about 300,000 persons who speak Italian. Of the total population in 1881, 22,702,356 were natives of the communes where they resided. The number of marriages in 1883 was 284,519; the number of births, 937,944; that of deaths, 841,101. The excess of births over deaths was 78,947 in 1884, 96,843 in 1883, 97,027 in 1882, 108,229 in 1881, 61,840 in 1880, 96,667 in 1879, 98,175 in 1878, 142,620 in 1877, 132,608 in 1876, 105,913 in 1875, and 172,943 in 1874. The birth-rate, which was 31·1 per thousand inhabitants in 1827, had fallen to 22·6 in 1871. In 1873 it was 26·1, and in 1883, 25·0. While the number of births increased very little between 1881 and 1884, the annual mortality rose from 828,000 to 858,784.

In 1884 the number of births was 937,758, of deaths 858,784. In the departments ravaged by the cholera and some others, particularly in Normandy, in thirty-nine departments altogether, there was an excess of deaths, but in the comparatively poor departments of Brittany a considerable excess of births. The ratio of illegitimate births was 1 in 11 of the whole number; the ratio of births to the population 29 per thousand; of deaths, 27 per thousand.

The emigration in 1882, exclusive of Algeria, was 5,100, the emigrants to the United States numbering 2,737, those to the Argentine Republic 1,402. Emigration to Algeria averaged 8,000 a year in the lustrum ending with 1883. The rural population in 1881 was 65·2 per cent. of the total, the town population 34·8 per cent. as compared with 24·42 per cent. in 1846. Of the 37,405,290 inhabitants enumerated, 18,249,209 were dependent on agriculture, 9,324,107 on industry, 3,843,447 on commerce, 800,741 on transportation, 552,851 constituted the public forces, 1,585,358 dependent on professions, 2,121,173 lived on their incomes, 737,088 were without occupation, and of 191,316 the occupations were unknown. The agricultural population comprised 2,425,500 farmers working their own lands, with 1,583,283 employés and 5,167,749 persons in their families; 1,010,999 farmers renting their lands, with 1,186,501 persons in their employ, and 2,834,925 in their families; 772,339 small proprietors working for others, with employés numbering 660,213, and families numbering 2,039,484 persons; and 112,200 foresters, employing 105,043, and having families numbering 300,973 persons. Of the persons classed as professional, one half were public officials. More than one fifth of the owners of land are women. There were 1,001,090 foreigners in France at the time of the census, including 279,351 Belgians in the department of the Nord, and 374,498 Belgians altogether, 165,313 Italians, 62,437 Spaniards, 59,028 Germans, 50,203 Swiss, 30,077 English, 20,232 Dutch, 12,090 Austro-Hungarians, 10,489 Russians. There were besides 77,046 naturalized foreigners. The number of sentences for crime in 1883 was 3,480; the number of convictions for minor offenses, punishable with imprisonment, 122,833; the number of prisoners in the central prisons 22,301, including 6,206 women; the number of convicts in Guiana and New Caledonia, 11,883. The following cities contained over 100,000 inhabitants in 1881: Paris, 2,239,928; Lyons, 376,613; Marseilles, 360,099; Bordeaux, 221,305; Lille, 178,144; Toulouse, 140,289; Nantes, 124,319; St. Etienne, 123,813; Rouen, 105,906; Havre, 105,867.

The Army.—The army has been reorganized since the Franco-German War, under the recruiting law of 1872 and subsequent acts. Every Frenchman is liable to serve in the army or the reserves between the ages of twenty and forty years. By the law of 1882 the annual recruit was divided into two classes, one serving three years in the active army and two in the reserve, and the other only one year in the active army. Of 312,924 on the conscription lists of 1883, 132,063 were drafted into the army, and 7,206 into the navy. The army, as provided for in the budget for 1885, has a total strength of 524,797, including those absent on leave, etc., and the gendarmerie, which numbers 26,865 men; deducting the number sick and absent, the strength was 483,933 men. The expenditure on the army in 1884 amounted to 716,318,580 francs. The strength of the army as given in the budget for 1884 was as follows: staff, 4,083; schools, 2,720; administrative, medical, and unclassified, 3,463; infantry, 392,879; administrative troops of the infantry, 19,306; cavalry, 68,778; artillery, 70,103; engineers, 11,039; train, 11,853; gendarmerie, 23,275; garde républicaine, 3,590; mixed companies, 3,708; total, 524,797 men, with 130,771 horses. The territorial army and its reserves have their individual bodies attached to certain localities, while the active army and its reserve are not localized. The total military strength of the republic, inclusive of the various classes of reserves, is about 2,500,000 men.

The Navy.—The French naval forces comprise 22 squadron ironclads with 345 guns, 10 station ironclads with 171 guns, 8 guardships with 27 guns, and 6 floating batteries with 37 guns; or 46 ironclads in all, with 583 guns; 9 battery, 17 barbette, and 21 third-class cruisers, with 215,205 and 173 guns respectively, and 143 avisos, transports, gunboats, and other unarmored screw-steamers; 33 paddle-steamers, 45 sailing-vessels, and 18 first-class and 40 second-class torpedo-boats and 9 vedettes; total effective navy, 381 vessels, with 1,670 guns. The Amiral Duperré has 14-inch armor and carries 4 guns of 13⅜ inches and 11 of 5½ inches caliber. The Foudroyant, Dévastation, and Caïman have the same thickness of armor, the first two carrying, like the Duperré, four 46-ton guns, besides four of 28 tons, the Dévastation being armed in addition with six smaller guns. The Caïman, like the sister ships Indomptable and Terrible, which have 13-inch plates, is armed with two 72-ton guns and four small-bores, the latter carrying also four machine-guns each. The Furieux has 15¾-inch plates and carries two 46-ton and four revolving guns. The Fulminant and Tonnerre, armed with two 28-ton, besides smaller guns, have 11⅞-inch armor. There were building in 1884 the Formidable and Amiral Baudin, monster ironclads, with armor 17¾ to 21⅝ inches thick, carrying three 100-ton guns each, besides smaller ones; the Requin, a turret-ship with guns mounted *en barbette;* and, in a less advanced state, 6 other first-class ironclads, besides 2 of the second class and 8 armored gunboats, 3 cruisers, 12 torpedo-boats, and other vessels.

Finances.—The revenue from the various sources is given in the budget estimates for 1885 as follows:

RECEIPTS.	Francs.
Direct taxes, France	423,315,890
Direct taxes, Algeria	8,115,974
Domains and forests, France	53,018,300
Domains and forests, Algeria	3,022,734
Registration	553,544,000
Stamps	154,470,000
Customs	312,148,000
Excise, etc	361,503,000
Railroad-tax	92,291,000
Tobacco	379,051,000
Various indirect taxes	61,314,000
Sugar	151,067,000
Wine	153,549,000
Posts	138,788,000
Telegraphs	31,021,000
Algeria, indirect taxes	29,685,000
Personal property-tax, France	49,945,000
Personal property-tax, Algeria	179,000
Various sources, France	91,681,811
Various sources, Algeria	1,021,218
Total ordinary revenue	3,048,720,927
Budget of special receipts	469,746,475
Total	3,518,467,402

The disbursements under the various heads are set down as follow.

EXPENDITURES.	Francs.
Public debt and donations	1,325,178,244
General service of ministries	20,145,970
Collection of taxes, etc	185,530,288
Repayments. etc	12,886,000
Justice	38,944,400
Worship	51,095,066
Foreign Affairs	14,607,400
Ministry of the Interior	66,587,694
Genoral Government of Algeria	8,094,245
Posts and telegraphs	142,433,000
Ministry of War	596,306,230
Marine service	200.000,000
Colonial service	34,420.000
Instruction	137,548,523
Fine arts	15,702,805
Ministry of Commerce	18,938,998
Ministry of Agriculture	43.522,698
Public Works, ordinary service	101.367,165
Public Works, extraordinary service	35,235,213
Total ordinary expenditure	3,048,544,744
Budget of special expenditures:	
Ministry of Finance	183.424,005
Ministry of the Interior	266.116.500
Ministry of Instruction	16,059,300
Various expenditures	4,146.670
Total	3,518,291,219

The above sum does not include the budget *pour ordre*, consisting of the expenditures for the special services of the mint, the national printing-office, the Legion of Honor, the marine invalids, and the state railroads. An extraordinary budget for public works, war, and marine and colonies was subsequently introduced, amounting to 209,994,496 francs, making the total expenditures 3,861,133,867 francs.

The revenue and expenditure for the five years preceding were as follow, in francs; the actual receipts and expenditures being given for the first two years, the provisional returns for the next two, and the revised estimates for 1884:

YEARS.	Revenue.	Expenditure.
1880	3,530,823,284	3,364,577,723
1881	3,689,409,797	3,582,416,378
1882	3,654,263,289	3,684,677,869
1883	3,668,358,016	3,714,478,125
1884	3,354,785,178	3,385,409,496

The practice of showing a small surplus in the estimates, which turns into a large deficit in the final accounts, has been followed by all the Governments of France. In presenting the supplementary budget the minister said that the heavy charge for public works would be reduced each year, as it had been in the budgets for 1884 and 1885. The construction of railroads was severely criticised, and the suggestion was made by Opposition deputies that the state lines, which were mismanaged and their patronage abused for political purposes, should be sold. The war expenditures also should grow much lighter after the completion of the military reorganization and the fortifications of the frontier. The deficits from the beginning of the century down to 1881 amounted to 809,214,661 francs; since that year and down to 1884 an additional deficiency of 381,877,990 francs had arisen. In July, 1885, a bill was passed authorizing the issue of 319,000,000 francs in treasury bonds, running thirty years, the proceeds to be expended on schools and parish roads.

The public debt in 1885 amounted to 19,656,045,076 francs, consisting of 12,023,256,166 francs of 3 per cent. rente, 6,789,785,755 francs of new 4½ per cent., 831,850,755 francs of old 4½ per cent., and 11,152,400 francs of 4 per cent. funds. The conversion of 5 per cent. rente into 4½ per cent. rente, effected in July, 1883, reduced the annual interest by about 25,000,000 francs. The interest charge in 1885 was 706,116,867 francs. Besides the consolidated funds there is a floating debt, amounting to 1,095,733,100 francs on Jan. 1, 1884, and other redeemable obligations, requiring an expenditure of 404,588,451 francs in 1885, and annuities requiring 166,401,735 francs. The rente was held by nearly 4,100,000 individuals in 1883.

Commerce.—The value of the general imports in 1883 was $1,136,133,100, of the special imports $927,229,900; of the general exports

$880,408,100, of the special exports $666,216,700. Since 1876 there has been an annual excess of imports over exports, in the special commerce, amounting for the eight years to $1,635,000,000. There was also during the same period an excess in the imports of specie amounting to about $304,000,000. The special imports of coin and bullion in 1883 amounted to $28,178,000, the exports to $44,583,000.

Since the tariff reductions of 1860 the special commerce returns no longer indicate correctly the French consumption of foreign products or the exportation of French products. An analysis of the returns shows the net importation of the leading articles in 1883 to have been of the following amounts in millions of dollars: raw silk, 31; silk waste, 4; cotton, 31; wool, 58; flax, 8; hemp, 3; jute, 4; hides and skins, 21; lard and tallow, 7; timber, 10; gums, 25; copper, 8; cabinet-wood, 4; cattle, 29; colonial products, 49; coal, 30; wines, 27; cereals, 71. The values of the excess of exports over imports in the principal articles of French production were in millions of dollars as follow: manufactures of silk, cotton, flax, hemp, and jute, 104; domestic sugar, 20; brandy and spirits, 9; dressed skins, 12; leather manufactures, 25; jewelry, 13; metal manufactures, 10; fancy goods, 17; wearing-apparel, 11.

The total value of the special imports in 1883, comprising the imports destined for home consumption, was 4,804,349,000 francs, against 4,821,825,000 francs in 1882; the value of the special exports was 3,451,872,000 francs, against 3,574,356,000 francs in 1882. The special commerce of 1884, according to the preliminary estimates, amounted to 4,525,967,000 francs of imports and 3,350,100,000 francs of exports. The imports of articles of food are given as 1,499,507,000 francs in 1884, against 1,617,167,000 francs in 1883; the imports of raw materials as 2,194,255,000, against 2,278,627,000 francs; of manufactured articles as 643,775,000, against 704,450,000 francs; of other articles as 188,430,000, against 204,105,000 francs. The exports of manufactures in 1884 are stated as 1,722,311,000 francs, against 1,813,776,000 francs in 1883; of articles of food as 799,209,000, against 828,358,000 francs; of raw materials as 679,145,000, against 655,993,000 francs; of other articles as 149,435,000, against 153,745,000 francs. The imports of coin and bullion amounted to 148,236,000 francs in 1883, the exports to 236,182,000 francs. The imports of cereals in 1883 were valued at 375,000,000 francs, against 520,240,000 in 1882, 519,727,000 in 1881, 788,505,000 in 1880, and 859,376,000 in 1879; the exports in 1883 were of the value of 57,600,000 francs, against 56,800,000 in 1882. The imports of wines in 1879 amounted to 120,702,000 francs and the exports to 257,700,000 francs. In 1883 the imports, which have exceeded the exports every year since 1880, were valued at 376,684,000, and the exports at 236,500,000 francs. The imports of manufactured goods increased 82 per cent. between 1873 and 1883, the largest increase being in machinery, iron ships, metal wares, woolens, cottons, and leather. The export of silk goods, which fell off from 301,419,000 francs in 1873 to 226,745,000 francs in 1878, rose again to 301,200,000 francs in 1883. Raw silk and cocoons were exported in 1883 to the value of 165,591,152 francs.

In 1879 and 1880, the years of large grain importations, the United States ranked first among the importing countries in French commerce, but in 1883 fell to the sixth place, with $68,000,000 of imports, England coming first with $134,000,000, then Belgium with $95,000,000, and Germany, Italy, and Spain next in order. The special exports from France to the United States in 1883 were $67,569,300 in value, being only exceeded by the exports to England, $174,894,800 in amount, and those to Belgium, valued at $90,980,200. The imports of cotton from the United States in 1883 were valued at $26,467,000; of grain and flour, $19,501,000, an increase of $10,985,000; of lard, tallow, and grease, $5,998,500; of tobacco, $3,804,000; of petroleum, $4,430,000. The special exports of silk manufactures to the United States in 1883 amounted to $17,205,000; woolen goods, to $17,698,000; dressed hides and skins, to $2,673,000; cotton manufactures, to $2,144,000; feathers, to $2,314,000; wine, to $2,313,000. The exports from the United States to France, as given in the United States official returns, were 55 million dollars in 1883, 54 in 1882, 70 in 1881, 99 in 1880, and 93 in 1879, while the French returns make the imports from the United States into France 68 millions in 1883, 75 in 1882, 97 in 1881, 141 in 1880, and 138 in 1879. The imports into the United States from France are given in the American reports as 84 million dollars in 1883, 97 in 1882, 77 in 1881, 74 in 1880, and 56 in 1879; and in the French official returns the exports from France to the United States were reported to be of the value of 67 million dollars in 1883, 70 in 1882, 61 in 1881, 64 in 1880, and 53 in 1879. A large proportion of the imports of American origin are credited, in the French returns, to England, Belgium, and Germany. The exports to America that pass through foreign ports are in like manner set down to the European countries which are their first destination. The declared value of exports from France to the United States for the year ending Sept. 30, 1884, was $67,782,266, being $12,853,372 less than in 1883; the decrease was chiefly in merinos, cashmeres, and miscellaneous dress goods, wines and brandy, silk goods, laces, artificial flowers, jewelry, glassware, and works of art. There was an increase in drugs and medicines, shawls, fancy goods, oils, furniture, and woolen cloth.

The returns of the total importations of merchandise for the first six months of 1885 show a small decrease as compared with the same period in 1884, the imports of raw materials being about the same, manufactured articles 12,000,000 francs less, and alimentary articles 3,480,000 francs less, although grain imports were 3,600,000 francs more. The wine import was 172,000,000 francs—18,000,000 less than in the first six months of 1884, which showed a decrease of the same amount as compared with the corresponding part of 1883. There were larger imports of sugar, coffee, meat, fats, codfish, and cheese, and smaller imports of olive-oil, rice, and cattle. The imports of silk, hemp, guano, oil-seeds, timber, and coal showed a decrease, and, among manufactured articles, those of worsted, cotton, linen, and hemp goods, paper, leather, machinery, tools, hardware, furniture, and vessels. An increase is noted in worsted thread, linen thread, and silk goods. The total exports increased 46,113,000 francs. Jewelry, silk goods, and machinery show a considerable falling off. The export of wine increased 21,000,000 francs; but sugar shows a falling off from 57,000,000 francs in the half-year of 1883 to 37,169,000 in 1884, and 21,805,000 in 1885. The total exportation of alimentary products was 4,000,000 less than in the first half of 1884.

Navigation.—The total number of vessels entered and cleared at French ports in 1883 was 58,198; their aggregate burden, 22,023,000 tons—an increase of 1,693,000 tons as compared with 1882. Over 48 per cent. of the tonnage was French. The United States ranks fourth among the countries having maritime intercourse with France, the commerce of Great Britain being represented by 7,490,000 tons of the total; that with Algeria by 2,139,000; that with Spain by 1,772,000; that with the Atlantic coast of the United States by 1,363,000; and that with Italy by 1,328,362; Russia, Germany, India, the Argentine Republic, Turkey, and Sweden coming next in successive order. The American tonnage entered at French ports decreased rapidly from 138,447 in 1880 to 33,500 in 1883. The French mercantile marine numbers 14,327 sailing-vessels, inclusive of 10,859 under thirty tons, employing 43,803 seamen. Their aggregate tonnage is 536,191; the number of seamen, 76,403. The steam fleet numbers 895 vessels, of an aggregate tonnage of 467,488 tons, employing 6,430 engineers and firemen and 11,856 seamen. Of the 1,003,679 tons of the merchant fleet, steam and sail, in 1883, 513,687 represent the vessels engaged in long voyages, 212,191 those plying in European and Mediterranean waters, 108,844 those employed in the coasting trade, and 168,957 those employed in bank and coast fishing, pilotage, towing, and pleasure-sailing. Of the 13,685,445 entered in 1883, 5,605,677 were British, 4,553,272 French, 812,996 Italian, 673,972 German, 590,451 Norwegian, and 444,254 Spanish.

Agriculture and Industry.—The area sown to wheat decreased from 7,034,087 hectares (1 hectare = 2½ acres) in 1869 to 6,803,821 in 1883, and the production from 107,941,553 to 103,753,426 hectolitres. The wine production decreased from 70,000,000 hectolitres in 1869 to 25,000,000 in 1879, and then increased to 36,000,000, or 951,030,000 gallons, in 1883. The production in 1882 was 815,915,562 gallons; the importation, 199,104,929 gallons; the exportation, 69,159,706 gallons. Considerable quantities of wine have been manufactured of late years from imported raisins: 2,681,000 hectolitres in 1883, and 1,630,000 in 1884, and from the residuum of the wine-press, by adding sugar and water, 1,255,000 hectolitres in 1884. The wine-crop of 1884 was 34,780,726 hectolitres; the area planted to vines was 2,040,759 hectares—405,241 less than in 1874, and 55,000 less than the preceding year. The production of refined sugar was 242,000,000 kilogrammes in 1869. In 1875 it reached the highest point, 473,000,000 kilogrammes, and subsequently declined to 396,000,000 in 1883. There were 1,204,145 acres under beet-root in 1883, yielding 322,303,120 cwt. of sugar. The product of wool in 1882 was valued at 83,272,543 francs; of lard, 18,274,495 francs. The product of the Newfoundland codfisheries in 1883 was 46,993,370 lbs.; of the Iceland codfisheries, 28,841,701 lbs.; the catch of herring, 81,249,460 lbs.; of mackerel, 14,624,227 lbs. The estimated wheat product of 1884 was 315,363,485 bushels; acreage, 17,239,175; the rye product, 72,321,033 bushels; and the maslin product, 19,306,489 bushels. The alcohol product in 1883 was 53,125,010 gallons. The output of coal in 1883 was 21,446,199 tons; the importation, 9,258,112 tons; the exportation, 438,434 tons. The production of iron was 968,068 tons; of steel, 500,045 tons; of castings, 2,067,387 tons. The live-stock in 1883 included 2,868,728 horses, 11,756,482 cattle, 23,405,845 sheep, and 5,710,775 hogs. The cultivable land in France is divided into 5,550,000 separate properties. The surface of the country is classified in the cadastral survey as follows: land of superior quality, utilized for orchards, gardens, etc., 695,929 hectares; cultivable lands and lands estimated as such, including building-lands, railroads, canals, etc., 26,173,657; meadow and pasture lands, 4,998,280; vineyards, 2,320,533; woods, 8,397,131; uncultivated lands, 6,746,800; land under various cultures, 702,829 hectares. Of the cultivable lands, 37,039,040 acres were, in 1883, under cereal and leguminous crops, yielding 742,176,807 bushels. The value of the mineral product, including salt, was, in the census year, 290,000,000 francs; of the metallurgical product, 553,000,000; of the sugar product, 211,000,000. The national income is estimated at 23,711,500,000 francs; the total value of lands and buildings at 128,692,500,000 francs.

Railroads.—The railroad system of France increased from 9,086 kilometres in 1860 to 27,191 in 1884. The state advanced to the companies 809,931,473 francs, in capital and interest, up to the beginning of 1883. The railroads are nearly all in the hands of six great companies. They are divided into the old and the new networks. The old network has a total length of 10,877 kilometres, of which 4,913 kilometres are owned by the Paris-Mediterranean, 2,017 by the Paris-Orleans, 1,363 by the Northern, 900 by the Western, 820 by the Southern, 744 by the Eastern, and 120 kilometres in Paris by minor companies. The total length of the new network is 10,993 kilometres, of which 1,797 belong to the Paris-Mediterranean, 2,343 to the Paris-Orleans, 764 to the Northern, 2,247 to the Western, 1,588 to the Southern, and 2,255 to the Eastern companies. There were, besides, on Jan. 1, 1884, 4,396 kilometres belonging to the state, about one half of which lines were worked by the companies, and 915 kilometres belonging to other companies. The lines of the new network, which are built with a view to public utility and are not expected to yield immediate profits, receive a state guarantee of 4 per cent., with 0·65 per cent. additional for a sinking fund. In July, 1885, France had 31,000 kilometres of railroads, the gross earnings of which amounted to 1,150,000,000 francs per annum; the number of persons employed was 223,000. The revenue derived from the railroads by the state is 83,000,000 francs. An underground railroad for Paris has been authorized by the legislature. A line is to cross the city from north to south, and another is to cross it from east to west, running up one bank of the river and down the other.

Telegraphs.—The state telegraph system has been worked at a loss ever since its establishment in 1851. The total length of lines in 1883 was 75,081 kilometres, or 46,932 miles, the length of wire 232,451 kilometres. The number of messages in 1882 was 26,174,567, of which 4,167,782 were international.

The Senatorial Elections.—The triennial election of one third of the Senate, held under the new law proportioning representation to population in a much greater degree than the old law, took place January 25. Including casual vacancies, there were 87 seats to be filled. The result was favorable to republicanism. Corsica, already represented in the Chamber by Republican deputies, exchanged its Bonapartist senators for Republicans. The Charente Inférieure, another Bonapartist stronghold, elected Republicans. The Duc de Broglie, the great leader of the Monarchists, was defeated in the Eure by M. d'Osmoy, a Republican deputy. M. de Fourton likewise lost his seat. In Paris M. Spuller, the Ministerial candidate, was defeated by a Radical candidate, M. Martin. The Republicans lost 3 seats in the Protectionist departments of the Nord and Pas de Calais to Reactionaries, but gained 25 in other parts of France. Of the vacant seats, 42 had been held by Reactionaries and 45 by Republicans. Of the successful candidates, only 20 were Reactionaries and 67 were Republicans. Of 30 deputies elected to the upper house, 28 were Ministerialists, but some of these were committed to Radical measures opposed by the Government. The result gave the Ministerial Left a clear majority, and deprived the Left Center of the casting vote, just as that group succeeded in 1882 to the Simonite Republicans who frequently voted with the Reactionary parties against the Republicans.

Change of Government.—At the beginning of 1885 the Ferry Cabinet, constituted Feb. 21, 1883, was still in power. Gen. Campenon, Minister of War, resigned January 4, because the Cabinet had extended the operations against China beyond the Tonquin delta, and weakened the army for the defense of France by the sending out of re-enforcements. Gen. Lewal accepted the portfolio and assumed charge of military operations in China, which had previously been under the control of the Ministry of the Navy. The Tonquin enterprise and the war with China were never popular with the Radicals. When large re-enforcements were sent out in the winter and spring, and still no signal success was obtained, the feeling of dissatisfaction and distrust spread. The Cabinet was suspected of withholding information. When the news of the Langson disaster came, M. Ferry was accused of keeping back the dispatches. M. Clémenceau and his party were joined by the Reactionary groups in an attack on the ministry. The feeling against M. Ferry out-of-doors was so strong that the various Republican groups that composed his party could not longer afford to recognize him as their leader. His enemies threatened to impeach the ministry for a breach of the Constitution, in making war without the sanction of Parliament. When M. Ferry asked, on March 30, for an extraordinary credit to continue the war, M. Clémenceau declared that he had not ministers before him, but "accused persons," and said that succor must be sent to the soldiers fighting against heavy odds, but "there must be ministers who would speak the truth." M. Ribot, of the Left Center, submitted a resolution affirming the resolution of the Chamber to uphold the national honor, expressing confidence in the army, censuring the blunders committed, and regretting that it had not hitherto known the truth. M. Ferry's request of priority for the vote of credit was refused by 308 votes to 161, whereupon he announced that the Cabinet would hand in their resignations to the President.

President Grévy turned first to M. Brisson, but the President of the Chamber declined. An attempt to form a combination was made by M. de Freycinet, but the ex-Premier was distrusted by the Radicals, and failed to secure the promised support from the Opportunists. M. Devès and M. Constans, of the Opportunists, were successively applied to, but a member of the Republican Union could no longer command a majority. M. Brisson was then requested to undertake the task. As Speaker of the Chamber he stood in the line of succession to the presidency of the republic. Though he was warned by Gambetta's example, who accepted the premiership under more hopeful circumstances, the call of public duty was too imperative to be slighted. The Cabinet was formed April 5 with the help of M. de Freycinet, and was composed as follows: Minister of Justice and President ef the Council, M. Henri Brisson; Minister of Foreign Affairs, M. de Freycinet; Minister of the Interior, M. Allain Targé; Minister of Public Instruction and Worship, M. Goblet; Minister of War, Gen. Campenon; Minister of Marine, Admiral Galiber; Minister of Finance, M. Clamageran; Minister of Public Works, M. Sadi Carnot; Minister of Commerce, M. Pierre Legrand; Minister of Agriculture, M. Hervé-Mangon; Minister of Posts and Telegraphs, M. Sarrien. M. Brisson, when a deputy, had enunciated views in favor of secularizing the property of the congregations, the separation of church and state, the extension of municipal liberties, a retiring fund for agricultural and industrial laborers, and other advanced ideas. The Extremists gave him their ready adhesion. The other groups, including the vanquished Opportunists, promised him their support without demanding pledges or conditions.

The ministers on the day they accepted office were informed by M. Ferry that preliminaries of peace had been signed with the Chinese plenipotentiary (see ANNAM). Nevertheless, in order to be prepared in case they were deceived in a peace negotiated in a manner so irregular, they asked for and obtained a war credit of 150,000,000 francs.

The new Cabinet contained no one of extensive ministerial experience except M. de Freycinet. To satisfy the Radicals, every member of the late Cabinet was excluded. Henri Brisson, born July 31, 1835, was associated with Ferry, Challemel, Spuller, and Allain-Targé, on the "Temps" in 1869, was a prominent member, of strong democratic opinions, in the National Assembly of 1871, was President of the Republican Union, and was chosen Speaker of the Chamber by large majorities in the last three sessions. Senator Charles Louis de Saulces de Freycinet, born Nov. 14, 1828, was a celebrated engineer, and conspicuous in the organization of the national defense. After making his mark as a debater, he became Minister of Public Works in 1877, and afterward of Foreign Affairs, retiring in 1882 in consequence of his indecision in the Egyptian question. He was a friend of Gambetta, but parted company with the later Gambettists, as did Brisson also. Allain-Targé was another journalistic associate of Gambetta's. Clamageran, born in New Orleans, in 1827, is a political economist and jurist, who had charge of the provisioning of Paris during the siege. Gen. Campenon, in reassuming charge of the war-office, was prepared to prosecute vigorously the occupation of Tonquin. The French forces in Indo-China were increased and organized, under Gen. de Courcy, as a complete army corps, like the forces in Algeria. M. Clamageran purposed bringing into shape the disordered finances, by raising a loan and by extensive reforms and removals in the administration. The Gambettists objected, and, as this plan was disapproved by his colleagues, he resigned his portfolio, which was taken by M. Carnot. In the conflict with Egypt and Great Britain over the suppression of the "Bosphore Egyptien," M. de Freycinet took a firm position with Nubar Pasha. The French consul-general, St. René-Taillandier, was recalled from Cairo. The English Government supported Nubar at first, but finally gave way, and the difficulty was settled with an apology and the re-establishment of the obnoxious newspaper.

The Session of the Chambers.—Upon the meeting of the House of Deputies in January, M. Brisson was re-elected President, and upon the organization of the Senate, M. Le Royer was again chosen to preside over that body. The budget, which in former times was disposed of before the 1st of January, was delayed three months, the Government being carried on in the mean while by a vote on account. A conflict was threatened between the Senate and the Chamber, which grows more and more inclined to deny the right of the upper house to co-operate in fiscal legislation. The Chamber struck out appropriations in the draft budget for canonries and theological faculties. The Senate, asserting anew the doctrine that the Chamber has not the right to abolish established institutions by the method of withdrawing supplies, reinserted the grants. The abolition of seminary scholarships and of the theological faculties, with them the ancient Sorbonne of Paris, though the name continues to be borne by the faculties of Arts and Science, was approved by the Government, on the ground that the Holy See declined to recognize the faculties, and the bishops distrusted them. The canonries, however, were retained. After M. Brisson's acceptance of the premiership, M. Floquet was elected Speaker.

It was decided to repeal the paper duty, supplying the deficiency by raising the price of superior tobacco and cigars, but as this was insufficient, the tax was continued until Dec. 1, 1886. The Senate voted against the repeal, but upon its withdrawing its opposition the Chambers were prorogued Aug. 6. The most important enactments are described below.

Scrutin de Liste.—A bill for the election of all the deputies of each department on a single ticket was reported by the committee before the close of the year 1884. It makes the number of deputies from each department proportionate to the population, at the rate of one for every 70,000 inhabitants. In 1881 *scrutin de liste* was intended to open the path for M. Gambetta's election to the presidency, by securing his return at the head of a great number of departmental tickets. It then passed the Chamber by only 243 votes to 235, and was rejected by the Senate. In the final vote on the new bill in the Chamber, on March 24, a majority of 402 to 91 was recorded. The two main arguments in favor of *scrutin de liste* were that it would strengthen the hold of the republic upon the constituencies, and that it would put an end to interested politics and the degrading services that constituents expect deputies to perform for their private or local advantage. The bill provided that no elections should take place before the general election, in order to avoid the necessity of filling the thirty seats vacated by the election of deputies to the Senate within three months as the existing law prescribed. Princes of families that have reigned in France are declared ineligible in a Senate amendment.

Tariff Legislation.—Notwithstanding the protests of free-traders, of the mercantile and industrial classes, and of the Boards of Trade in all the large cities, the proposed protective duties were laid on grain and meat by laws passed March 28, 1885.

The new tariff on cereals imposes the following rates of duty per 100 kilogrammes on foreign grain and flour: on wheat, spelt, and maslin, 3 francs; on wheat or rye flour, 6 francs; on oats, rye, or barley, 1 franc and 50 centimes; on malt, 1 franc and 90 centimes. Products from extra-European countries imported from European bonded warehouses pay a sur-tax of 3 francs and 60 centimes on the metric quintal. On sea-biscuit, groats, oatmeal, and pearled or hulled grain, a duty of 5 francs and 50 centimes is imposed, and on these articles also the *sur-taxe d'entrepôt* is collected when not imposed directly.

The new tariff on animals and animal products imposes the following rates of duty per head on live animals: on oxen, 25 francs; on cows, 12 francs; on bulls, 12 francs; on young bullocks, bulls, and heifers, 8 francs; on calves, 4 francs; on sheep, 3 francs; on lambs, 1 franc; on goats, 1 franc; on hogs, 6 francs; on sucking-pigs, 1 franc. On fresh meat a duty of 7 francs per 100 kilos is laid, and on salted meat one of 8 francs and 50 centimes, skins paying duty at the same rates.

The committee of the House of Deputies voted at first in favor of a remission of the land-tax for the relief of agriculture and a tax on spirits to restore the equilibrium of the budget in the place of the proposed corn-tax; but upon reconsideration decided in favor of the original bill. The price of bread, which the advocates of the corn law argued would not be affected, advanced before the act passed the Senate in consequence of a rise in the prices of wheat and rye. The Paris Municipality rejected a proposition to revive the assize of bread, but the Lyons authorities reintroduced the custom of fixing the price for the bakers.

Tariff War with Roumania.—The opponents of these protective measures, to which the Government was driven by financial stress to resort, warned the legislature of the disastrous consequences to French commerce and industry if the United States should place retaliatory duties on French manufactures. Retaliation actually came from Roumania, whose commercial treaty with France expired in 1876. The most-favored-nation treatment with states conducting negotiations for commercial treaties was enacted by the Roumanian legislature in 1878. On March 18, 1885, this concession to France was recalled, and the Government empowered to levy duties of 50 per cent. ad valorem on French products by the restoration of the autonomous tariff of 1876. The law went into operation July 13. The French Government claimed that the treaty made with Turkey in 1861, which was made applicable to Wallachia and Moldavia, revived upon the lapse of the convention of 1878. The Roumanian Government replied that France had been the first to break the treaty, by imposing vexatious restrictions on the importation of Roumanian cattle, and by levying a sur-tax on Roumanian cereals. M. Ordega, the French envoy in Bucharest, demanded that a new treaty should be made, threatening that if this were not done France would be closed to Roumanian grain, and that friendly political relations would cease. In the beginning of July the Cabinet introduced a bill to impose duties amounting in certain cases to 50 per cent. of their value upon imports from Roumania. The bill was passed July 17 by the Chamber and August 15 by the Senate.

The Army Bill.—By the army law of 1873 the system of substitution that prevailed under the empire was abolished. In its stead a category of exemptions was established and the institution of one-year volunteers adopted. Formerly a conscript could obtain his release from military service by paying 2,500 francs, which went to the person who volunteered to serve in his place, generally a soldier who had served out his own time. The class of one-year volunteers, established by the act of 1873, consisted of conscripts who could pass an examination and were willing to pay 300 francs toward their maintenance in barracks for the twelve months they were required to do duty. The institution grew to be very unpopular, because it created an aristocratic distinction in the ranks of the army. The military authorities also condemned it, declaring the volunteers to be useless as soldiers, and a source of discontent and demoralization in the ranks. Exemptions were granted under the act of 1873 to the only sons of widows, to cripples, and to students for the priesthood and the professoriate. A bill changing the recruiting laws was the subject of a considerable political agitation at the time of the senatorial elections. The Radicals desired not only to abolish the privileges of the one-year volunteers but to constrain the clergy to fulfill the duties of citizenship by serving as soldiers in the army. Equal liability to service for all classes of citizens was the principle of the bill, framed to suit the popular desire. It reduced the nominal term of service from five to three years. The peasantry were pleased with the proposal for lightening the "blood-tax." The military authorities wished to have the period of service longer, and to retain for the sake of efficiency and economy certain discretionary rights, the exercise of which was a cause of inconvenience to the people. The actual length of service was about three years, and sometimes shorter. Often, to save barrack expenses, soldiers were sent home on short furloughs in the winter season. The uncertainty with regard to the length of service with the colors was the cause of much dissatisfaction. The new bill abolished the immunity from service of seminarists and teachers, and granted exemption only to cripples absolutely unfit to serve even as military clerks or infirmary attendants. The Chamber refused even to exempt priests from serving as reservists. The consideration of the bill by the Senate was postponed to the next session.

A Premium to Large Families.—The slow rate of increase in the population of France has long been the subject of patriotic forebodings and regrets. The natural increment between 1876 and 1881 was only 0·42 per cent. per annum, two fifths of the rate in Great Britain and Ireland, and one fifth of that in the United States. As an encouragement to the people to propagate larger families, the Chamber of Deputies, on July 10, voted an appropriation of 400,000 francs, to be expended in supporting and educating every seventh child of poor parents. The same principle was contained in an obsolete law of the First Republic, which this action revived.

The Recidivist Law.—The law for the deportation of relapsed criminals and misdemeanants finally passed the Senate on May 12. The same day a law was enacted abolishing public executions. The Radical and Clerical opponents of Waldeck-Rousseau's scheme for ridding France of the criminal element stood out for giving judges discretional authority to transport or inflict other punishment; yet the majority of 329 to 79 accepted the ministerial measure. The principal contest was about the site of the criminal colony. Deportation to the malarious coast of Guiana, the "dry guillotine," was formerly held to be one of the crimes of the Third Empire. The criminalists found arguments to justify the re-establishment of the only penal colony now possible without creating foreign complications. M. Leveillé, who examined the locality, reported that it was not so unhealthful as was supposed. He proposed an amendment in the Senate that was adopted by both houses, providing for a probation period for the convicted recidivists, and leaving it optional with the authorities to send to the colony the incorrigible subjects and exempt those who gave signs of improvement. The dangerous and degraded class of *entreteneurs*, or male confederates of prostitutes, was included with the other categories of recidivist offenders. Those detected in this offense who have been guilty at any time of criminal offenses against property or morality are liable to deportation. The other classes of recidivists are those who have been twice guilty of robbery, theft, fraud, breach of trust, and crimes against morality, or have committed certain combinations of these offenses, as well as ex-criminals who are habitual beggars or vagrants. This Draconic law was strongly opposed by the Extreme Left. To support it, statistics were adduced to show an increase of crime and disorderly conditions. In Paris particularly the security maintained by the highly organized police machinery of the empire had given place to chronic disorder and a growth of crime that had for its consequence the decrease of foreign visitors and residents, to the prejudice of business interests. Large gangs of professional criminals had formed to plot burglary and robbery. They were recruited from a numerous class of idle and disorderly persons, associates of thieves and prostitutes, which was dealt with by the recidivist law in such wise as to enable the authorities to break up the schools of crime. The recidivist law abolished police surveillance, substituting a power to prohibit persons who have been convicted by the tribunals from residing in particular places. The police accordingly notified persons of the criminal class that they would not be allowed to remain in Paris or any of the large cities, nor in the places where their crimes had been committed. The Government was left to select a French colony that should be used as a convict settlement. The colony of Guiana, and especially the territory about Moroni, was fixed upon as the locality where the first recidivist colony is to be established.

Socialistic Agitation.—In the early part of 1885 a succession of demonstrations of a socialistic character took place in Paris. Various appeals were made to the Government for aid to the unemployed. On Feb. 1 a meeting of Anarchists was held, attended by representatives from all the large towns. A deputation from the meeting obtained a hearing from members of the Chamber, and the same week M. Tony Revillon proposed a credit of 25,000,000 francs for the 246,000 persons said to be starving. A second resolution, moved by the same deputy, to the effect that the public works projected in Paris should be proceeded with at once, was carried by a large majority. A proposition to pass the interest on the city's debt in order to relieve the laborers that were out of work, was previously rejected by the Municipal Council of Paris.

On the 16th of February the Germans who took part in the funeral of Jules Vallès were set upon by students, but defended by the French Socialists. On the 21st of February an imposing meeting was held in the Salle Levis, the well-known assembly hall of Batignolles, followed by one in St. Denis on the

22d. The same day the Workmen's Peace Association held an international meeting at which resolutions against every policy of war and conquest were passed. A great demonstration of Socialists was planned for the 18th of March, in which Germans were invited to participate. The Minister of the Interior issued decrees of expulsion against twenty-two foreign Socialists, including sixteen Germans and an American lady. In various demonstrations the Anarchists persisted in carrying red banners, which they held did not come within the regulation prohibiting the red flag as a seditious emblem. Scuffles with the police were occasioned thereby.

On May 24 the Socialists went, as is their custom, to deposit wreaths of everlasting on the spot where the Communards were massacred in Père Lachaise. The red emblems borne in the procession gave occasion for the interference of a large body of police and republican guards. In the ensuing struggle several Anarchists and policemen were injured. The next day the Anarchists invited fresh interference at the funeral of M. Cournet, though the Government had announced that red banners, in contradistinction from flags, would be allowed, a decision that was unfavorably contrasted in the press with the more rigorous measures of the Ferry Cabinet. At the funeral of Victor Hugo the revolutionary bodies were invited to meet at one place by the authorities, and when the red emblems were displayed in the procession they were immediately seized by the police, who were present in large force in plain clothes. In May occurred a strike among the tailors of Paris. Later in the year a long-threatened strike of the Lyons silk-weavers took place. A motion of M. Clovis Hugues to amnesty Rose Michel, Prince Krapotkine, and the other condemned Anarchists, was rejected in the Chamber on May 16 by 278 votes to 122. Louise Michel was offered a pardon shortly before, but refused to accept it unless the other Anarchists were included.

On Sept. 20 an election riot took place in the Bourse, where a meeting of Revolutionists had been called, and the Possiblists and Anarchists engaged in a struggle for the possession of the platform.

The Monetary Conference.—A conference of the Latin Monetary Union was called for Jan. 15, but was postponed at the instance of France until April 15, and then again until July 20. France and Italy agreed to renew the convention, subject to the condition that when the Union expired each country should take back its own coin. Belgium was unwilling to accept this obligation. In the conference the Belgian delegate, still objecting to this stipulation, proposed a renewal of the Union for one year. The other powers would not agree, and Belgium, consequently, withdrew from the conference. At the end of 1885 she ceases to belong to the Latin Union, and intends to adopt the single gold standard. The French, Italian, and Swiss delegates differed in regard to legal tender in Italy and the mode of redeeming Swiss silver coins in case of liquidation. Unable to draw up a new convention, they adjourned on Aug. 5. Belgium seemed disposed to accept the liquidation clause if a continuance of the Union until 1895 was guaranteed. In the hope of reaching an understanding the other governments proposed to prolong the Union provisionally till Jan. 1, 1887; but the negotiations failed, and a new convention was signed, Nov. 6, by the delegates of France, Italy, Switzerland, and Greece, without Belgium.

Religion.—The population was divided as to creed, in 1881, into 29,201,703 Roman Catholics, 692,800 Protestants, 53,436 Jews, 33,042 of various creeds, and 7,684,906 who professed no religious faith. In the budget of 1884, the sum of 50,795,223 francs is granted for the support of worship, 48,665,923 francs for the Roman Catholic clergy, churches, and seminaries, and the remainder to the Protestants and Jews, and the Mussulmans of Algeria.

Education.—Public education is under the direction of the central authorities. There were in 1884, 14,085 students in the universities, 8,307 of them in Paris; of the total number, 5,849 studied law, 1,581 philosophy, and 5,386 medicine. In 1872 more than one third of the adult population were unable to read and write; but under the system of compulsory education, which has only come into universal application within two or three years, all children receive elementary instruction. In 1883 there were 204,417 pupils in the lay and 439,967 in the clerical infant schools, 3,349,773 in the lay and 1,009,483 in the clerical public, and 218,088 in the lay and 763,867 in the clerical private primary schools; the total number of primary schools was 80,687, and the total number of pupils 5,985,595, besides 30,032 pupils in 567 superior primary schools. In the 85 lycées there were 48,313 pupils; in the 267 communal colleges, 41,344; in 371 free lay middle-class schools, 25,917; and in 331 clerical schools of the same class, 46,456. The number of teachers in the secular primary schools was 77,742, in the clerical 47,220. In 1884 there were 85,388 primary schools, with 6,111,236 pupils. There were 90 normal schools for males and 73 for females in 1884. In most of the communes free elementary education is provided for adults; the number of adult pupils in 1882 was 596,322. There are, besides, a great number of technical, industrial, and scientific schools.

The General Elections.—It was expected, at the time when the *scrutin de liste* was enacted, that the effect on the impending elections would be to increase the accessions to the Monarchists that were looked for in the next Chamber. In order to take the fullest advantage of the new electoral law, the different Royalist and Bonapartist factions formed a coalition called the Conservative Union. In the Côtes-du-Nord and some of the other departments, the Bonapartists seceded from the combination and set up separate tickets. M. Ferry was the spokesman of the Opportunists in the electioneering campaign. He was decried as "the sinister man of Tonquin"; yet he made no attempt to justify the mistakes of his ministry, but unfolded the doctrines of Opportunism. The republic, he said, could afford to wait for reforms. The peasantry are the "granite foundation of the republic," and legislation should conform to their stolid and conservative mood, and not be hastened by the impatient impulses of the city populations. The socialistic projects of the Extremists he did not condemn as wrong, but as inopportune. He sought to win over the Radicals by describing them as the "vanguard" of republicanism. Clémenceau and the Radicals denounced the Opportunists for truckling to the money-power and forming a "shameful syndicate" of private interests, defeating the democratic hopes of the people and doing less for the working-men than the empire had done. M. Paul Bert said that the time had come to turn the course of the ship of state further to the left. The Reactionaries stigmatized as the chief sins of the Republicans their extravagance, which added four milliards to the debt in eight years, the Tonquin Expedition, and their outrages upon religion, notably their treatment of the clergy, compulsory school attendance, and the divorce law. The Conservatives offered nothing that was calculated to attract popular support in the place of republicanism. The Bonapartists had two candidates, neither of whom possessed the qualities of either Napoleon; Bourbonism was an obsolete and unintelligible doctrine; and Orleanism promised only a repetition of the republic in the guise of a monarchy. The Radicals presented a confusing multiplicity of programmes that convinced the rural voters more than ever of the danger of intrusting the Government in such reckless hands. Their most common demands were the separation of church and state, and the extension of universal suffrage to the Senate and the presidency. A progressive income-tax was a part of their general programme, also an elective judiciary and cheap justice, and universal three years' military service. The unexpected Conservative gains in the elections indicated partly a feeling of dismay at the growth of Radicalism, and partly dissatisfaction with the conduct of affairs by the Opportunists, but not a genuine reaction in favor of monarchical government. The Minister of Education issued a circular saying that the Government would exercise strict impartiality, and expected teachers and other functionaries to abstain from partisan conduct. The general election took place Sunday, Oct. 4. The number of deputies elected was 584. In the late Chamber the Royalists and Imperialists together counted only 95 seats. There was dismay in Paris when it was known that they elected 183 members on the first ballot. The Republicans set up a variety of lists, corresponding with their various shades of opinion, and were able, by combining, to win most of the secondary elections. An absolute majority of the votes cast and a vote equal to one fourth of the registered electors was necessary for election. The Republican leaders arranged to have all the lists withdrawn on the second ballotage, except the ones that received the highest number of votes. The popular vote was about 7,500,000, and 3,300,000, or not much fewer than half of the total number of ballots, were cast for the Reactionary lists. M. Mangon, Minister of Commerce, and M. Pierre Legrand, Minister of Agriculture, lost their seats and resigned their portfolios. The central and eastern departments remained solidly Republican. In the south, Ardèche, Lozère, Aveyron, and neighboring districts, were won by the Monarchists; while immediately north, Gironde, Dordogne, and other departments went over to the Republicans. Corsica reverted to Bonapartism. The Nord, Pas-de-Calais, and Somme, before represented principally by Republicans, elected Conservatives. The Reactionaries gained also in Manche, Eure, Orne, Calvados, Mayenne. In Ille-et-Vilaine the towns just turned the scale in favor of the Republicans. In other departments of Brittany and La Vendée and the Bonapartist districts of the north, where many towns formerly returned Republican members, the Conservatives now carried their entire tickets. In the southwest, where the vote was previously divided, a marked Conservative reaction was observed. Paris and the Rhône, and other industrial centers of the south, returned Radicals. The Radicals gained sixty seats, and numbered about one hundred and fifty in the new Chamber. Among their successful candidates were Socialists of the stamp of M. Rochefort, who took a prominent part in the Republican counsels in the coming session. The ruling motive with the Radicals and the other Republicans who joined with the Reactionaries in overturning the Ferry ministry, was to take away from M. Waldeck-Rousseau, the Minister of the Interior, and from M. Ranc, the party manager, the power of controlling the elections. The new Chamber contains 391 Republicans and 205 Reactionaries, the relative strength in the last Chamber having been 462 to 95. The ministers offered their resignations to President Grévy on Nov. 6, but he declined to accept them. The vacant post of Minister of Agriculture was filled by the appointment of M. Gomot, and that of Minister of Commerce was given to M. Dautresme.

Alsace-Lorraine.—The question of the recovery of the Rhenish provinces came up continually in connection with the Tonquin expedition. In the parliamentary controversy between M. Clémenceau and M. Ferry, the former declared that a nation whose frontier had been weakened should not scatter its forces over the globe. The anti-German agitation was kept up by a Patriotic League, of which M. Deroulède was the head. This body selected for one of its officers, against his own wish or knowledge, M. Rothan, a distinguished French diplomatist and historian of the events leading to the war of 1870, who resided in Alsace. The Strasburg authorities, for that reason, expelled him from the province in August. On Sept. 20 the Paris Anarchists made a riotous demonstration in the Bourse, taking possession of the building, and making speeches from the platform.

Olivier Pain.—The statement made by a former interpreter of the English intelligence department in the Soudan, that Olivier Pain, the French journalist and ex-Communard, who visited the Mahdi, was captured and shot by the English, created so much excitement in Paris, that the French Government instituted an inquiry and requested the English Government to investigate the facts. The account of the interpreter Selikovitch turned out to be false. Pain is said to have been sent to El-Obeid by the Mahdi, who refused his proffer of advice, and to have died on the way. The English officer in command at Dongola set a price on his head, in the hope of getting possession of important documents.

American Artists.—The Parisian press in 1885 demanded the exclusion of Americans from the French schools of art, in retaliation for the action of Congress in retaining the duties on foreign works of art, with the exemption of productions of American artists.

Algeria.—The settled districts of Algeria have been administered by a civil government since 1871, while the territory of the Sahara and the adjoining districts remain under military rule. The Governor-General is M. Louis Tirman, appointed in 1881. In 1884 the revenue from the colony was 32,144,285 francs. The expenditures always exceed the taxes collected in the colony. In the budget for 1885, they are set down at 43,871,161 francs. The French troops in Algeria are formed in one army corps, numbering in 1885 57,956 men. The area of the colony is 318,334 square kilometres, or 122,876 square miles, with a population in 1881, exclusive of nomads, of 3,310,412 souls, of which number 2,822,947 lived in the civil territory, and 487,465 in the military districts. The number of French settlers was 233,937. The net immigration in 1880 was 17,740. There were in 1881 2,850,866 French Mussulman citizens, 114,320 Spaniards, 35,665 naturalized Jews, 15,402 Maltese, 4,201 Germans, and 22,328 other foreigners. The number of persons engaged in agriculture was 2,328,636. The product of wheat in 1882 was 11,190,000 cwt.; of barley, 15,800,000 cwt.; of olive-oil, 574,000 gallons; of tobacco, 9,490,000 pounds. The special exports in 1883 were valued at 167,994,420 francs, of which 97,581,975 francs went to France; the special imports at 238,198,967 francs, of which 154,478,410 francs came from France. The railways in 1884 had a total length of 993 miles, the telegraphs in 1882 of 3,645 miles.

Colonies.—France in recent years has extended her protectorate over new countries in Asia and Africa. The area and population of her dependencies, exclusive of the colony of Algeria, that were acquired before 1881, are as follow: In Asia—possessions in India, area 508 square kilometres, population 271,568; French Cochin-China, area 71,460 square kilometres, population 1,598,517; Tonquin, a protectorate, area 165,200 square kilometres, population about 15,000,000; Cambodia, a protectorate, area 83,861 square kilometres, population 1,594,497. In Africa—Tunis, a protectorate, area 118,000 square kilometres, population about 2,000,000; Senegambia, area 250,000 square kilometres, population 191,608; Gaboon and the Gold Coast, area 20,000 square kilometres, population 186,133; Réunion, area 1,979 square kilometres, population 172,048; Mayotte, area 366 square kilometres, population 10,800; Nossi-Bé and Ste. Marie de Madagascar, area 293 square kilometres, population of the former 9,009, of the latter 7,179; Obock, area 495 square kilometres. In America—Cayenne, or Guiana, area 121,413 square kilometres, population 27,335; Martinique, area 987 square kilometres, population 167,181; Guadeloupe and dependencies, area 1,869 square kilometres, population 200,771; St. Pierre and Miquelon, area 235 square kilometres, population 5,534. In Oceania—New Caledonia and dependencies, area 19,823 square kilometres, population 68,584; Marquesas Islands, area 1,274 square kilometres, population 5,776; Tahiti and Moorea, area 1,179 square kilometres, population 10,808; Toubouaï and Raivavai, area 209 square kilometres, population 693; Puamotu, Gambier, and Rapa Islands, area 1,000 square kilometres, population 7,970; Clipperton Island, area 5 square kilometres.

In 1882 France began a series of military operations to compel the Hova Government to acknowledge her protectorate over the northern part of Madagascar (see MADAGASCAR). In virtue of recent treaties her protectorate is extended over the whole of the kingdom of Annam (see ANNAM). A convention concluded with the Congo Association in 1885 confirms the French protectorate over an enormous tract on the Ogowe and the middle Congo (see CONGO, FREE STATE OF THE.) In 1882 and 1883 the protectorate in Senegambia was extended to Segou, on the Niger. In 1884 Grand Bassam, area 30 square miles, Assinie, and Porto Novo, or Cootenos, area 5 square miles, on the Gold Coast, were reoccupied. All the French colonies as well as Algeria are represented in the Chamber of Deputies and the Senate, and form politically a part of France.

The colonies of Martinique, Guadeloupe, and Réunion have established preferential duties on French products. Cochin-China also in 1885 exempted French goods from 75 per cent.

of the customs duties, a measure that extends to Cambodia, Annam, and Tonquin, as part of the Indo-Chinese Customs Union. A credit was voted in August, 1885, for the organization of the colony of Obock and of a protectorate over Tadjourah and neighboring territories as far as Gabbet Karah. The object is to establish a coaling-station at Obock.

FRIEDRICH CARL, Prince, a German general, born in Berlin, March 20, 1828; died of apoplexy, June 15, 1885, at Schloss Glienecke, near Potsdam. Prince Friedrich Carl of Prussia was the only son of Prince Carl, brother of the Emperor Friedrich Wilhelm. His mother, Princess Marie of Saxe-Weimar, was the sister of the Empress Augusta. Among the various military tutors that attended to his education was Major von Roon, afterward Prussian Minister of War. In 1848 the Prince became a captain in the Foot-Guards. As a very young man he earned the name of a brave and dashing soldier in the Danish War of 1849, in which he held the rank of captain of the Guards. He led a regiment in a flank attack at Schleswig which decided the battle. Sent with a dispatch by Marshal Wrangel, and finding it inapplicable, he executed the manœuvre on his own responsibility. In the campaign against the revolutionists in Baden, he was twice wounded at Wiesenthal. He was appointed colonel of the Dragoon Guards in 1852. In 1855 he visited Paris and studied the French military system. After the Franco-Austrian War of 1859 he had lithographed for private circulation a pamphlet containing criticisms on the French tactics, and suggestions as to the best way of opposing them, which was published without authority by a Frankfort bookseller, and caused ill feelings in France. He had already written several military essays that gained him a high reputation for professional ability. He became a major-general in 1854 and a lieutenant-general in 1856. He was placed in command of the Third or Brandenburg Army Corps in 1860, and in 1861 became a general of cavalry. For ten years he was commander of the Third Army Corps, which he brought to a high degree of tactical excellence. In the Danish War of 1864 he commanded the Prussian corps that formed the right wing of the allied army. In this campaign he won the reputation of a cautious and able strategist in addition to that of a brilliant and daring cavalry commander. He had the credit of forcing the Danes to evacuate Schleswig. In the beginning of February, 1864, he marched his troops over the Eider and began the siege of Düppel, which fell April 18. In the gallant storming he led the Prussian assault. The soldiers gave him the nickname of "Prinz Allezeit Voran" (Prince Ever to the Front). In May, upon the retirement of Field-Marshal von Wrangel, he took chief command of the army of operations, and ordered the crossing over to Alsen on the 29th of June.

In the Austrian War of 1866 he was given command of the First Army. The campaign was for him a succession of triumphs. He marched into Saxony, advanced through Bohemia, won the battles of Münchengrätz and Gitschin, took part in the battle of Königgrätz, occupied Saarbrünn and Sunderburg, advanced into Hungary, and would have taken a whole army corps prisoners of war at Presburg if an armistice had not intervened. The Austrian General Benedek expected the Prussians to act on the defensive, and was unprepared for their rapid advance through Bohemia. Prince Friedrich was exceedingly popular with the soldiers of the Prussian army, winning their admiration by his rough and ready manner, and their attachment by sharing dangers with them, and attending to their needs and comforts. In the decisive battle of Königgrätz, or Sadowa, he held his troops in the center, sustaining the brunt of the whole battle against overpowering odds, until the army of the Crown Prince came up just in time to save them from defeat. Prince Friedrich Carl has been accused of opening the fight an hour before he was ordered, in order to win the decisive victory before the arrival of the Crown Prince. But his conduct of the battle was so skillful, and the action reflected such luster on the Prussian arms, that this grave fault, if he committed it, was condoned.

In the Franco-German War Prince Friedrich Carl commanded the largest of the three German armies, and gained some of the brightest victories of the war, achieving a place among the imperishable names of German military history. At the head of the Second Army, numbering 260,000 men, he defeated Gen. Froissart, at Speichern, won the victories of Mars la Tour, Gravelotte, and St. Privat, and drove Bazaine back to Metz, where he shut up the army of 173,000 men, repelling the numerous brilliant sallies, in which they lost 40,000 men, until starvation compelled them to surrender. Then, marching over to the Loire, the Red Prince, as the French called him, because he always wore the scarlet uniform of the Uhlans, conducted the most difficult operations in the war, a campaign against superior numbers, conducted with great prudence, vigilance, and sagacity. In the beginning of December, 1870, he advanced upon Orleans and defeated the army of Aurelle de Paladines. Then, as the Loire Army under Gen. Chanzy was preparing to take the offensive, he advanced to Le Mans, and in a seven days' fight crushed the last army that could have succored Paris.

He was made a field-marshal as a reward for the capture of Metz, and was loaded with honors for his brilliant services during the war. After the war was over, as inspector-general of the cavalry, he gave his attention to improving the horsemanship and tactical evolutions of that arm.

Prince Friedrich married in 1854 Princess Maria Anna, of Anhalt-Dessau, who was intended for the present Crown Prince, but, on account of the ill health of the latter at the time, was given to his cousin. The princess was a lady of agreeable disposition and refined tastes, admired and respected on every hand; yet she had little in common with the rough soldier to whom she was wedded, and showed no warmth of affection for her husband, who treated her with still greater indifference. When, after the birth of three daughters, the Prince's hopes were finally satisfied in 1865 by the birth of a male heir, Prince Friedrich Leopold, he paid so little regard to the claims of his family that his wife called him to account for his infidelities and threatened divorce proceedings. The Emperor interceded and arranged terms of separation, which satisfied the pride of the aggrieved spouse. Friedrich Carl, who had been the victim of petty jealousies at court, cared little for the disgrace that followed the scandal. His later years were spent in hunting and farming at Glienecke. His eldest daughter, the widow of Prince Henry of the Netherlands, is married to Prince Albert of Saxe-Altenburg; the second daughter, to the Crown Prince of Oldenburg; the third, to the Duke of Connaught.

FRIENDS. The question whether the outward observance of what are known as the "ordinances of the Church," such as baptism and the celebration of the Lord's Supper, should be tolerated, has been under discussion for several years in many of the yearly meetings of the Society of Friends. These ordinances have been held by the society to be entirely of spiritual import, and to be received spiritually, and not visibly or externally. It has been claimed in the discussion of the question, on the one side, that the society has steadily protested against the use of the symbols; and, on the other side, that concessions have been made by men held in respect by the society; that those who use the symbols are not without scriptural warrant, and that the symbols themselves are not inconsistent with the spirituality of the gospel. In the New York, Indiana, and Western yearly meetings, action has been taken against the outward observance of the rites of baptism and the Lord's Supper. The subject was brought before the Ohio yearly meeting in September, 1885, in memorials from several quarterly meetings. It was referred to a large committee, from which a majority report was presented, reaffirming the views that had always been held by the Friends, and declaring that "we believe that the baptism which appertains to the present dispensation is that of Christ, who baptizes his people with the Holy Ghost, and that the true communion is a spiritual partaking of the body and blood of Christ by faith. Therefore, no one should be received, acknowledged, or retained in the position of minister or elder among us, who continues to participate in or advocate the necessity of the outward rite of baptism or the Supper. Monthly meetings shall be bound by this rule." A protest against the action contemplated in this resolution was presented by the minority of the committee, and the resolution itself, when put to the meeting, was rejected by a vote of two to one. Among the points of objection presented by the opponents of the resolution during the discussion upon it were that, "for a church to judge any member as an offender, except for some moral offense, or one against the evangelical faith or teachings of the Bible, is to violate the constitutional law of the universal Church of Christ, and to pass an act of secession from it, and to take our place as a schism or conventicle governed by rules of our own making"; that "the proposed enactment makes an unwarrantable and invidious distinction between 'ministers and elders,' and the membership of the Church, who are untouched by it"; and "that it is, therefore, not only an invasion upon the sacred rights of the ministers of Christ, but a bold attempt to tamper with ministerial conscience, and fetter the Spirit of God."

FUEL, GASEOUS. Current progress in the utilization of fuel is mostly in the direction of preparing the material for more intense combustion, and for more perfect control after combustion. Both of these results are attained by volatilization — converting the crude fuel, whether solid or liquid, to the gaseous condition that it must assume in any case before active combustion can take place. The distinction between the fuel of the past and the fuel of the future is simply the distinction between crude fuel and prepared or gaseous fuel. Two important materials have but lately been successfully applied to the purposes of fuel—mineral oil and the hydrogen of water—and these are no exception to the broad statement that important progress in fuel is limited to preparation by volatilization. Valuable methods have been developed within the past five years for the better utilization of water-hydrogen, oil, and coal; but all of them converge to the one point, of getting the fuel into the perfectly controllable and directly combustible condition of gas. The importance, in the economy of fuel, of these two properties of gas, especially the latter, is as yet but slightly appreciated. Consequently the improved modes of fueling have made little progress with capitalists and the public, or even with engineers.

High-Temperature Fueling.—It has been demonstrated, by the water-gas process of Strong (see the "Annual Cyclopædia" for 1883, page 375), that the economy of fuel-gas largely exceeds the cost of converting the crude material, together with the loss involved in the cooling of the product, for storage as a public supply. And yet, while stored gas will perhaps always be a more practicable resource in large communities than the use of private apparatus can be generally made, it is certain that not only is the waste in cooling the manufactured gas avoidable by uniting production and combustion simultaneously, but a surprising calorific power is also gained by the combustion of gases at extremely high temperatures accumulated in the retorts where they are generated. Two instances of such practice may here be given. The first is an instance of the use of oil and water at a high temperature of their vapors in the moment of contact, and at a much higher temperature in the moment of their contact with air.

Reaction in Superheated Oil and Steam.—Many devices have been tried for burning oil as fuel, and many of these devices have sought to employ the decomposing power of hot carbon upon steam. None of them attained any decided economic progress until the burning of the oil-vapor was postponed to the decomposition of the water-vapor, and the freed gases were burned all together, in an enormous accumulated heat, on which a dividend, as it were, of surplus heat could be declared without impairing the capital stock of heat on which the continued production of such a surplus depends. In the water-gas locomotive "C. Holland," this principle was in a measure realized. Oil and steam were admitted by gauge into highly heated retorts placed in the fire-chamber of the boiler, and the carbon of the oil was allowed to take up the oxygen of the steam alone, in the absence of atmospheric oxygen. The temperature at which this reaction takes place between carbon and water-oxygen has been determined, by the Swedish chemist Dahlerus, to be about 400 or 450° centigrade. Theoretically, it has been assumed that the heat evolved by the recombustion of the separated elements of water must be balanced by the heat absorbed in separating them. But practically, from some cause or other, it has been found, even under ordinary conditions (not of such extreme heat as was employed in the after-combustion of the separated elements in the Holland-engine furnace), that the exchange of carbon for water-hydrogen resulted in a considerable gain of heat. It is still more significant that, as determined by Grassi, the number of pounds of water raised one degree by the union of one pound of oxygen with its full combining equivalents of carbon and hydrogen respectively, were 2,893 and 4,333. The direct gain by exchange, therefore, would be almost exactly 50 per cent. But the practical economy of using oil and steam in this way proved to be much greater (computing commercial cost) than the scientific determinations seemed to account for. Out of many tests of the locomotive "C. Holland" on different railroads, it is sufficient to quote from the report of its work on the Eastern Railroad, which corresponds with all others:

> Comparative statement of the performance of engine "C. Holland," known as the "water-gas engine," and engine No. 31, of our own road, for six days, Dec. 31 to Jan. 5, inclusive, both running in the same service (regular schedule passenger-trains): Engine "C. Holland," cylinders 15 × 24 inches, run 216 miles, consumed 796 gallons of naphtha, at cost of $15.92. Engine No. 31, cylinders 15 × 22 inches, run 216 miles, consumed 12,960 pounds of coal, at a cost of $27.77.

The carbon of oil is consumed by combination with the pure oxygen of steam, no atmospheric air having access to it in the retorts, and thus the large amount of heat always lost by absorption in the nitrogen of an air-blast is here saved, so far as the carbon is concerned. Then the combustion of both the direct and the produced fuel is perfect, as against a semi-combustion of coal. Besides, the hydrogen-flame is the most advantageous of heating agents, from its unequaled intensity and rapidity of action, and from the energy with which it is diffused and thrown upon every available point of heating surface. The rapidity with which heat is imparted increases in a geometrical ratio to the increase of its intensity, and since the hydrogen-flame is so many times hotter than carbon in combustion, its concentrated heat must have a vastly greater effect, unit for unit, in any given time of passage through the flues. But it remains to be added that the already intensely hot gases issue at the burners in contact with distinct jets of heated air, with the effect of a blow-pipe.

Anthracite-Gas Furnace.—This furnace is applied to a stationary steam-boiler. The first maxim in its construction is to get the fire away from the water—the direct opposite of the first object with boiler-makers hitherto. This is in order to secure the grand condition of the best combustion, which is the highest initial heat; and also to provide for the volatilization of the coal, by a temperature that could not be attained in a furnace surrounded by water. Subsidiary to these purposes, extreme measures are taken to confine the heat both from radiation and from escape in the gases. The products of combustion, after imparting to the hot water in the boiler all the heat it can take from them, are cooled in the air-blast down to about 150°, before being allowed to escape. The exhaust steam is also condensed into the feed-water. The hot-air blast is gauged into the furnace in the exactest possible proportion to the volume of fuel-gases with which its oxygen is to unite, and is driven with sufficient force to insure the utmost activity of circulation throughout the labyrinths of the combustion-chamber and of the boiler. The combustion-chamber is in two distinct parts, one above the other; although the proper operation in the lower chamber where the coal is put is volatilization without combustion, or nearly so, after the initial firing-up. Both chambers are strictly air-tight, down even to the feed-door and the ash-pit. The upper or gas-combustion chamber is a labyrinth of perforated fire-brick, containing thousands of minute passages and returns for the gases to be driven through, superheated, and atomized together into the finest mixture; the fuel-gas and air-blast meeting in these passages from opposite directions, and not until both have been heated to the highest practicable degree. At first, after the coal has been ignited, and sends its gases into the chamber above, to meet the heated air-blast, the combustion there becomes progressively intense, and the whole mass of perforated fire-brick (amounting to many tons in the large furnace at Wallace's brass-works in Ansonia) is soon at a white heat as dazzling as the sun. No metal can be used in the structure, but in an exterior protected from the heat by great thicknesses of non-conducting material; for no metal could stand for one minute the temperature at which the air and fuel gases of this furnace are called to meet each other, thousands of degrees above the hot condition in which they enter the gas-chamber. The upper stratum of coal and its inclosure are wholly of the same sun-like whiteness and brilliance as the fire-bricks above, upon which no human eye could look without flinching. But practically no combustion is going on there, at least when the furnace is run intelligently, according to its true ideal, and with its greatest actual economy. In such case the air-blast is mainly shut off from the crude-fuel chamber, leaving only a minor pressure under the grate to balance the pressure from above, but not to penetrate the coal; the main strength of the blast being thrown into the labyrinths of the gas-combustion chamber. The unparalleled heat to which the coal is evidently being subjected is therefore entirely due to hot products of combustion containing no free oxygen, which beat down on it from the excess of pressure above so violently as to give visibility to the motion of the transparent conflicting currents. The grate-bars are not even red hot. The dazzling-white coals, when taken out and cooled instantly, exhibit no traces of combustion. The solid anthracite is unpenetrated by oxygen, and as clean and lustrous in fracture, throughout, as any lump just taken from the mine. Its specific gravity is not in the least diminished. All it has lost has been taken off by a volatilizing heat and sent up in gases of various kinds—various, for not even the mineral ash is left behind. After tons of coal have been consumed, hardly anything is found in the ash-pit save a small quantity of crumbled coal-dust, perfectly black, and a still smaller proportion of what may be called accidental ashes. A small amount of melted slag is occasionally cleared from the surface of the grate; very little of this, however, unless the inveterate persistence of old notions in the engineer misapplies the combustion-blast to the coal. The proper place for the whole of combustion and of the combustion-blast is the gas-chamber. There the oxidization is made as sudden, as complete, and as exact as possible, and thence the pure products of perfect combustion pass into the boiler at their hottest from the hottest part of the furnace, which is the top, and farthest from what seems to be the fire; while in part they beat down upon the coal, as already mentioned, and find perhaps a partial vent from the coal-chamber, where there is a minor flue into the boiler, which may or may not be opened.

Calorific Results.—Ten pounds of water made into steam at 60 pounds pressure by a pound of coal is standard practice for the best stationary boilers. The writer of this article assisted at a twenty-four-hour test, made by competent civil engineers, of the Blanchard furnace and boiler at the Ansonia Brass-Works. The first twelve hours were given to practice somewhat on the usual theory of progressive combustion beginning in the coal, and completed from carbon monoxide to dioxide in the gas-chamber. The results were decidedly under the standard. The next twelve hours were run with some regard to the true idea of the system as above explained, and resulted in nearly doubling the standard and actually exceeding the theoretical value of the fuel as hitherto supposed to be established. Every pound of coal was weighed as it went in; all the water used was measured with equal care; the temperature of the water and the pressure in the boiler were recorded every half-hour; and the sum of the figures showed incontestably that over 17 pounds of water at lower than standard temperature had been made into steam under ten pounds more than standard pressure, for every pound of coal that had been consumed in the twelve hours. The proper corrections for the standard of comparison raised the result to 19 pounds. A fact equally strange, and even more staggering to natural belief, is that the hotter the furnace was run, the less fuel was actually consumed—not less in proportion, but absolutely less! This was the writer's observation on a number of occasions, both with the large furnace and with a smaller and less complete one elsewhere, and also on many occasions with the other (oil) apparatus for high-temperature gas-combustion before referred to. Of course, there is a limit to the operation of such a rule as this; but the limit had not yet been found.

Fuel-Gas for Domestic Use.—Much attention has been given to the problem of consolidating coal-dust for an economical fuel; but, with this material as with others, improvement seems to lie in the direction of volatilization. The cost of coal is little more than that of the labor of mining and transporting it, and the difference in favor of coal-dust in these respects is not so much as to overbalance very greatly the cost of reconstructing it in coals. Vast stores of this comminuted fuel are accumulated at the mines, and will yet be made available. But coal-dust is practically much nearer to gas than to coal. The Strong process transforms it into one of the most powerful of calorific gases, carbonic oxide, and also, in so doing, obtains from water the most powerful fuel in the universe, hydrogen. By placing the gas-works as deep as practicable underground, these gases will be made nearly self-transporting, as well as the dust-heaps that are to be brought from short distances to the works. Whenever this scheme shall be carried ont, cities will be supplied with the cheapest domestic fuel-gas of which it is now possible to conceive. The anthracite water-gas is of course non-luminous, but it is easily carbureted for illuminating purposes by passing it, as it is wanted in every house, through a simple oil carburettor. Injection of steam into the Blanchard furnace produces enormous volumes of water-gas.

Gas-Stoves.—The cost of ordinary street gas to the consumer varies so much, that it is impossible to fix upon any general ratio to the cost of other fuel. Its heat, however, when it is well burned, surpasses that of any other fuel in use, as applied to a given surface, and its concentrated applicability to the purpose in hand without waste by diffusion, comparatively, or by the long processes of ignition and unnecessary burning, of solid fuels, make up three grand advantages, which are sufficient to counterbalance amply the average price of city gas, so far as light cookery is concerned. For continuous domestic use, and for laundry or heating purposes, gaseous fuel, as it is, can not be recommended on the score of economy or healthfulness. It is as great a mistake to allow the casual want of a chimney to tempt one to charge the atmosphere of a room with the products of gas combustion as of wood or coal combustion. Most of the gas-stoves sold are adapted for burning illuminating gas, and the adaptation has been carried to a high degree of perfection.

Vapor and Water-Gas Stoves.—Stoves for burning oil-vapor require a light oil, which is dangerous in ignorant and careless hands. Consequently, the domestic or retail sale of such oil is prohibited in New York and other cities, and the sale of vapor-stoves is restricted to the country, and they are not very popular even there. For those that are able and willing to exercise a reasonable degree of care, the oil-vapor stove is by far the most agreeable and economical means for light cookery as yet available. The oil-tank is placed at a distance from the stove (outside the house as easily as any way), and separated from the heat by any number of yards or rods of pipe obstructed with wire filters that allow no passage of flame or combustion. Holland's domestic water-gas realizes partially the economy of exchanging carbon for hydrogen, and yields a cleanly, smokeless, odorless fuel, which in burning for months has not soiled in the slightest degree the outside of the cooking utensils or the inside surfaces of a stove fresh from the foundry. With naphtha at three dollars a barrel (three cents per gallon), the cost of running a large cook-stove, with a "quick" oven, is three fourths of a cent an hour. It makes a loud roar in burning, and requires, like the oil-vapor stoves, a lighter oil than most people like to use. Recent improvements allow the use of heavy oils, and even refuse, in steam practice with this process; but it is not likely that any heat less than that of a furnace or large range would be sufficient to convert the carbon of such oils fully and freely into carbonic oxide with the oxygen of water alone, so as to burn no hydrocarbons in the fireplace, and avoid the smoke and odors of their imperfect combustion.

Oil-Stoves.—The introduction of oil-stoves into general use has been wonderfully rapid for five or six years past. The maker and user of oil-stoves sail between the same Scylla and Charybdis as they of the oil-vapor stoves, namely, the dangers of the light oils and the smell and smoke of the heavy. There are many good oil-stoves on the market, any of which will yield a quite tolerable and certainly very convenient flame for weeks or even months before it begins the mysterious fits of sullenness and sootiness and pungent vapors to which all oil-stoves with wicks are subject in the most careful hands and with the best of oils. With light oils, on the other hand, the oil-stove can be run triumphantly the year round, with a continuous naphtha-smell, unless it happens to take fire inwardly and make an inextinguishable conflagration, which it probably will do. Many fatal disasters are reported from the use of oil-stoves, although there is doubtless no need for one in a hundred of them. The question of safety has engaged the attention of inventors, and some of the varieties have the main reservoir removed a little from the vicinity of the flame, at the back of the stove. This is certainly of great importance. One pattern has a large argand burner, and its oil entirely in a double-walled tank at the back of the fire, connected only by a quarter-inch pipe having an automatic feed-valve on the principle of the well-known German student-lamp. The oil in this reservoir and pipe is found to be always quite cold, however long and strong the stove may burn. It is well known that the argand burner is a valuable economist of combustion. It is allowed to save about 25 per cent. in this instance, which is partly offset sometimes by the necessity of burning the whole twelve-inch circle of wick or none. The average cost of running an oil-stove of this size is about one cent an hour. Where one has occasion to use it for but an hour or two at a time, this cost will amount practically to not more than one fifth to one tenth of the cost of a coal-fire.

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GAME OF THE UNITED STATES. Except Africa and Asia, no country in the world contains as large a variety of edible mammals and birds as the United States. Those that are hunted by dogs, pursued for either sport or profit, come under the general classification of true game.

Antelopes.—The antelope (*Antilocapra Americana*, Ord.) inhabits the plains of the western portion of North America. The mountain goat

(*Aplocerus Columbianus*, Coues) is confined to the loftiest peaks of the northern Rocky mountains, Sierra Nevadas, and Coast Range. The bighorn or mountain sheep (*Ovis montana*, Cuvier) is an inhabitant of the mountains of western America from the Missouri river to the Pacific Ocean; abundant in New Mexico, Arizona, and most numerous in the Rocky mountains, the Sierra Nevadas, and Coast Range.

Bears.—The grizzly bear (*Ursus horribilis*, Ord.) inhabits the western portions of the continent, from the Missouri river to the Pacific coast, but is mostly found in the Rocky mountains and the Sierra Nevadas. The black, brown, or cinnamon bear (*Ursus Americanus*, Pallas) is found from Maine to Texas, and from Florida to Washington Territory.

Buffalo.—The buffalo (*Bos Americanus*, Gmelin) has been so thoroughly exterminated in the United States that only about 700 head remain, of which 200 are in the Yellowstone Park and the others in the Pan-handle of Texas.

Deer.—The North American *Cervidæ* or deer family includes the most important of large game animals. Although still found throughout the whole of North America, from the Arctic Circle to Mexico, they are most numerous in the northern United States. The seven species are: Moose (*AlceAmericana*, Jard.), the largest of the *Cervidæ*, found in small numbers in Maine, Michigan, Wisconsin, more numerous in Minnesota, moderately abundant in western Montana, Wyoming, Idaho, Washington, and portions of Oregon. There are three ways of hunting the moose—by still-hunting, fire-hunting, and calling. There are two varieties of caribou: the barren-ground caribou (*Rangifer Grœnlandicus*, Baird) and the woodland caribou (*R. Grœnlandicus tarandus*). The former is found in British America; the latter, which is more southern in its habitat, occurs in Maine and the Rocky mountains. A few have been killed as far south as Boisé City, Idaho. Both varieties are great travelers, the woodland being very swift. They are best killed by still-hunting. The elk (*Cervus Canadensis*, Erxleben) is a near relative of the red deer of Europe. Formerly it was distributed over the whole of temperate North America, but now it is rapidly disappearing. A few are found in the lower peninsula of Michigan; west of the Missouri river, and in the Rocky mountains, there are localities where it is still moderately abundant; but in Colorado, Wyoming, and Montana during the past dozen years it has been greatly depleted by "hide and meat hunters." The completion of railroads through the old homes of elk have sounded its death-knell, and, as soon as shipping facilities are offered, the settlers ruthlessly sally forth and destroy these noble animals far and wide. The hides are secured and carcasses salted, and trains of wagons are employed to bring them to the stations. The elk has therefore been killed or driven from where it was once very numerous. The introduction of cattle has done much to drive the elk herds back, for the cattle usurp the feeding-grounds of the elk. Both the elk and the black-tail deer are afraid to remain in a district inhabited by cattle or sheep. Wanton butchery is rapidly exterminating the elk, as it has already caused the buffalo and moose to disappear. The mule deer (*Cariacus macrotis*, Gray) is found throughout the Missouri river region, in the Rocky mountains, and in the Sierra Nevadas. They are usually killed when the snow is on the ground, by still-hunting. The black-tail deer (*Cariacus Columbianus*, Gray) has a range confined to the mountains of the Pacific coast. It resorts to dense forests, and in several localities of the Sierra Nevadas is quite abundant. Still-hunting and hounding are the modes employed by hunters to kill this deer, but the Indians shoot large numbers by lying in wait for them at their drinking places. The Virginia deer (*Cariacus Virginianus*, Bodd, Gray) is the best known and most abundant of all the North American *Cervidæ*. Its habitat extends from ocean to ocean, and it is found in every State and Territory in the Union. Owing to the variety of locations which it inhabits, it is hunted in many different ways, such as by hounding, still-hunting, fire-hunting, and by "breasting," that is, by beating for it on horseback in the tall cane-grass, and, when it jumps from its bed, shooting it from the saddle. This method is usually employed in Arkansas and the Southwest.

Geese and Ducks.—The wild fowl of America include two species of swans, eight varieties of geese and brant, eleven "shoal-water ducks," and twenty-four species of fowl called "sea-ducks." Those most common to the sportsman, which are decoyed, are: the trumpeter swan (*Cygnus buccinator*, Richardson): it is not found east of the Mississippi river, being most abundant on the Pacific—it has recently been observed in Yellowstone lake; the American swan (*Cygnus Americanus*, Sharpless), found the whole breadth of the continent as far sonth as the Carolinas—it is a large, powerful, and wary bird, with no enemies but man and eagles; the white-fronted goose (*Anser albifrons*, var. *Gambeli*, Coues), "speckle belly," "brant," and "laughing goose," common in the Mississippi valley, and there called "prairie brant"—it is in great abundance on the Pacific slope; snow goose (*Chen hyperboreus*, Pallas), "white brant," distributed over the whole continent, only occasionally seen on the Atlantic seaboard, its home being westward of the Missouri river; blue goose (*Chen cærulescens*, Vieillot), "bald-headed brant," an inhabitant of the Pacific coast; brant-goose (*Branta bernicla*, Scop.), the common brant of the east coast, whose home in winter is in the broad waters of Virginia and North Carolina—this bird comes well to decoys, and in wild weather affords magnificent shooting; Canada goose (*Branta Canadensis*, Gray), the "common wild goose," "gray goose"—North America at large, and extremely abundant in several localities.

The shoal-water ducks (*Anatinæ*) include the mallard (*Anas boscas*, Linn.), known as the "green head," very abundant in the United States, especially in Wisconsin and Illinois; the dusky duck (*Anas obscura*, Gmelin), the "black duck" of the East and "black mallard" of the West, a very common variety on the Atlantic seaboard; the gadwall (*Chaulelasmus streperus*, Gray), commonly called the "gray duck," a bird chiefly confined to the interior; the American widgeon (*Mareca Americanus*, Steph.), sometimes called the "bald pate," abundant throughout North America, especially in Chesapeake Bay and the Western States; the green-winged teal (*Querquedula Carolinensis*, Steph.), scattered all over this country—a delicious table bird; the blue-winged teal (*Querquedula discors*, Steph.); the shoveler (*Spatula clypeata*, Boie.), known everywhere as the "spoonbill," abundant in the Middle and Southern States, Illinois, and Missouri; the wood duck (*Aix sponsa*, Boie.). This beautiful bird is sometimes called the "summer duck"; it is met with on all the fresh waters of North America.

The sea ducks are distinguished by naturalists as the *Fuligulinæ*, and differ from the fresh-water ducks by diving for their food. Usually the *Fuligulinæ* are fishy in taste, but the genus *Fuligula*, which includes the canvas back, the red head, and the broad bill, are considered as among the most delicious of all water fowl. The canvas back (*Fuligula vallisneria*, Steph.) is distributed throughout North America; its favorite grounds are the wild celery beds in Chesapeake Bay; of late years it has become less abundant, owing to the depredations of "night shooters"; the red head (*Fuligula ferina*, var. *Americana*, Coues), sometimes called pochard—abundant in Chesapeake Bay and Currituck Sound, North Carolina, and in the Western States in spring and autumn; the greater scaup duck (*Fuligula marila*, Steph.), called the "big black head," "broad bill," "blue bill," "raft duck," and "flocking fowl," very abundant throughout the United States; the lesser scaup duck (*Fuligula affinis*, Eyton), "little broad bill," etc., differs only in its size from the greater scaup duck; the ring-necked duck (*Fuligula collaris*, Bon.), found in Western marsh-lands; the golden-eye (*Bucephala clangula*, Coues), called the "whistler"—habitat, the whole of North America; the buffle head (*Bucephala albeola*, Baird); this little duck is known everywhere either as the "dipper," "butter ball," "spirit duck," "devil diver," or "salt-water teal"; the long-tailed duck (*Harelda glacialis*, Leach); this duck is shot more for sport than for food—it is known as "old wife," "old squaw," and "south-southerly," and found everywhere, even on inland waters; the eider duck (*Somateria mollissima*, Bon.), shot principally off the Massachusetts coast; king duck (*Somateria spectabilis*, Boie.), found on the north Atlantic coast in winter; the black scoter (*Œdemia Americana*, Swain), "copper nose" male, "gray coat" female, northern United States in winter; the surf duck (*Œdemia perspicillata*, Steph.), "sea coot," "skunk head"—Atlantic coast in winter: in Long Island Sound it is shot, from boats anchored in rows, by persons who consider the slaughter of worthless fowl sport; the ruddy duck (*Erismatura rubida*, Bon.), abundant in North America, and sometimes called "the greaser."

Grouse.—The grouse family of the United States embrace eight varieties, the most common of which are the ruffed grouse (partridge and pheasant) and pinnated grouse (prairie chicken). The Canada grouse, "spruce partridge" (*Canace Canadensis*, Reich), has its haunts in Canada, northern Maine, and the Adirondack region; and is usually treed by cur dogs and shot. The dusky grouse (*Canace obscura*, Bon.), with its *aliases*, "blue grouse," "gray grouse," "pine grouse," "mountain grouse," and "fool hen," has its habitat in Alaska, the Rocky mountain and Sierra Nevada country only. These birds are shot over setters and pointers in the usual way. The sage grouse (*Centrocercus urophasianus*, Swainson) is known as an inhabitant of the high, dry plains of the interior, which are covered with sage-brush. It is also called the "cock of the plains." It usually lies well to a dog, and sometimes affords fine sport. At the approach of cold weather the sage grouse congregates in packs numbering several hundred. The sharp-tailed grouse (*Pediœcetes phasianellus*, var. *Columbianus*, Coues), *vulgo* the "sprig tail," "pin tail," and "white belly," is found from Alaska on the north to Kansas on the south, and from Michigan to the Cascade range. It is the variety *Columbianus* that is found in the United States. It lies splendidly to a dog, is fast of wing, and its flesh is extremely delicate. This bird seems to retire before civilization, while its place is taken by the prairie-chicken. Another peculiarity of the sharp-tail is that it goes on wing, instead of running, to its feeding-ground. The pinnated grouse (*Cupidonia cupido*, Baird), commonly known as the prairie chicken of the Western States, has greatly increased in Nebraska and Dakota during the past fifteen years, owing to the immense sowing of wheat. But it is becoming very scarce in Indiana and Illinois, where it was once abundant. It is an admirable bird to work dogs upon, and affords great sport. In the Northern and Middle States the bird has been extinct for many years, and those who desire good shooting must go for it west of the Mississippi river. The ruffed grouse (*Bonasa umbellus*, Stephens) is the "partridge" of the East and North and "pheasant" of the South and Southwest. The whole continent is the range of this bird. It is very wary, and does not afford certain sport. Its favorite haunts are in the mountains, or in the impenetrable swamps at their base. Occasionally it lies well to a dog, but the majority of birds are treed by barking curs and killed by market shooters. The ptarmigan (*Lagopus albus*, Audubon), known as the "willow grouse" and partridge of Newfoundland, is a resident of the British possessions, although a few are found in winter in northern Maine, New Hampshire, Vermont, and New York. The white - tailed ptarmigan (*Lagopus Cucurus*, Swainson), sometimes called "white quail," is found only on the highest peaks of the Rocky mountains, and is but little known except to the naturalist.

Hares.—Of the *Leporidæ* there are nine species in America, eight common to the United States. These are: the prairie hare (*Lepus campestris*, Bachman), whose habitat includes the plains of the Saskatchewan southward to middle Kansas, and from Fort Reilly west to the Coast Range; the varying hare (*Lepus Americanus*, Erxleben), with its varieties. The habitat of var. *Americanus* is British America; of var. *Virginianus*, Nova Scotia to Connecticut, the Canadas, the northern tier of States westward to Minnesota, and southward in the Alleghanies to Virginia; of var. *Washingtonii*, westward of Rocky mountains into British Columbia; of var. *Bairdii*, the highest parts of the Rocky mountains southward to New Mexico. The gray rabbit, or cotton-tail (*Lepus sylvaticus*, Bachman)—with varieties *Nuttalli* and *Auduboni*—whose range is the whole of the United States; the Western hare (*Lepus Trowbridgei*, Baird), found west of the Sierra Nevadas from northern California to Cape St. Lucas; the jackass rabbit (*Lepus callotis*, Wagler), found in the United States between the ninety-seventh meridian and the Sierra Nevada mountains, and from north Kansas and the Great Salt Lake basin southward into Mexico; the California hare (*Lepus Californicus*, Gray), whose habitat is confined to California; the swamp hare (*Lepus palustris*, Bachman), found in the South Atlantic and Gulf States; the water hare (*Lepus aquaticus*, Bachman), whose range is in the Gulf States, south through the lowlands of Mexico to Central America. The methods employed to secure these animals are very numerous. The cotton-tail and the varying hare, the latter of which changes its coat spring and fall, are usually hounded or tracked in the snow. The jackass rabbit is coursed with greyhounds by the officers of the Western garrisons, and by a coterie of California sportsmen who have recently formed a coursing club. The other hare, which changes its color on the approach of winter from brown to white, is the prairie hare. Many hares are trapped and snared, and during the winter season car-loads are brought to the markets of our cities and sold at cheap rates.

Plover.—The family of plover (*Charadriidæ*) includes eight varieties, two species of which are followed by sportsmen: they are the black-bellied plover (*Squatarola Helvetica*, Brehm), variously called the "bull head," "black breast," "ox eye," "pilot," and "bottle head," common on the Atlantic coast and Western plains, aud the golden plover (*Charadrius fulvus*, var. *Virginicus*, Coues), known as the "frost bird," "green back," and "whistling plover." It is one of the most abundant migratory birds of the United States. On the plains west of the Mississippi it congregates in vast numbers. Both the above-named varieties answer to the whistling call of the fowler, and come well to his decoys. The other members of the plover family can not be classed as game.

Quail.—The *Odontophorinæ*, the sub-family to which the quail belong, contains over forty species. But a minor number of these, however, belong to the United States, the remainder having their habitat in Mexico and in Central and South America. Yet three of the southern species are found north of the Rio Grande. Of the six varieties that occur within the limits of the United States, the "quail" (*Oxtyx Virginianus*, Bon.) of the North, "partridge" of the South, which is also frequently called "Bob White," is the only one that lies well to the dog. By many sportsmen it is considered the typical game bird of North America. It is found generally throughout the United States, being most abundant in the West and South. It has recently been introduced in Utah. The quail is better protected during the close season than any other game bird. During the months of November and December it is shot and trapped in immense numbers. The mountain quail of California (*Oreortyx pictus*, Baird) is the largest species of quail. It inhabits the mountains of Oregon and California. It runs before the dog, and when flushed takes to the trees. The valley quail (*Lophortyx Californica*, Bon.), or, as it is sometimes called, the "meadow quail," is met with chiefly in California. In autumn the bevies pack and inhabit the plains, where the birds are easily shot. The Arizona quail, or Gambel's partridge (*Lophortyx Gambeli*, Nuttall), is confined to the southwestern portion of our territory. It is most abundant in New Mexico and Arizona. The blue quail, or scaled partridge (*Callipepla squamata*, Gray), is a great runner. It is most abundant in Texas, New Mexico, and Arizona.

Rails. — The family of the rails (*Rallidæ*) comprises a group of migrants which are very interesting little water birds. They are shot principally at high water, the sportsman standing erect in a boat, which is pushed by an attendant through the wild oats and floating reeds. As the boat surges ahead, the close-lying birds are forced to take wing, and thus afford an easy mark. Six species are more or less abundant in the United States—these are th clappere rail (*Rallus longirostris*, Bodd.), an inhabitant of salt-water marshes, commonly known as the "mud hen"; the fresh-water marsh hen (*Rallus elegans*, Aud.), known as the "king rail," and considered a rare trophy by sportsmen; the Virginia rail (*Rallus Virginianus*, Linn.), found in abundance in both salt and fresh water meadows, known as the "long-billed rail," "corn crake," and "red rail"; the Carolina rail (*Porzana Carolina*, Cassin.), the most common variety of all the *Rallidæ*, called the "sora" and "ortolan"; the Florida gallinule (*Gallinula galeata*, Bon.), which occasionally occurs north to Massachusetts, and is called the "king rail"; coot (*Fulica Americana*, Gmelin), "crow ducks," most common in Western marshes. There are two other varieties—the yellow or little rail, and the black rail—but these are rare.

Another bird met with by the rail shooter, and held in high esteem in September as a *bonne bouche*, is the reed-bird (*Dolichonyx orizyvorus*, Swainson)—the "bobolink" of the North and "rice bird" of the South. This bird is only killed for its edible qualities.

Snipe.—There is an immense variety of different species of shore birds scattered over the United States, which are commonly known as "bay snipe," and all of them are migratory. Those classed as waders, which can be decoyed by the sportsman, are: the long-billed curlew (*Numenius longirostris*, Wilson), known as the "sickle bill" and "Spanish curlew"; the Hudsonian curlew (*Numenius Hudsonicus*, Lath.), commonly called the "jack curlew"; the Esquimau curlew (*Numenius borealis*, Lath.), called the "fute" and "doe bird." This bird is an associate of the golden plover, and in some localities affects high table-lands. The great marbled godwit (*Limosa fedoa*, Ord.), called the "brown marlin"; the Hudsonian godwit (*Limosa Hudsonica*, Swainson), known as the "ring-tailed marlin"; the willet (*Totanus semipalmatus*, Temm.), a species very abundant on the Atlantic coast; the tell-tale snipe (*Totanus melanoleucus*, Vieill.), locally called the "yelper," "big yellow legs," "large cucu," "tattler," and "stone snipe"; the little yellow legs snipe (*Totanus flavipes*, Vieill.); the red-breasted snipe (*Macrorhamphus griseus*, Leach), known as the "brown back," "gray back," "dowitcher," and "driver"—a very gentle bird, and easily decoyed; the red-breasted sandpiper (*Tringa canutus*, Linn.), known as the "robin-snipe," "red breast," "knot," "gray back," and "ash-colored sandpiper"; the red-backed sandpiper (*Tringa Alpina*, var. *Americana*), locally called the "black breast," "winter snipe," and "red back"—known on the coast from Maine to Florida; the long-legged sandpiper (*Micropalama himantopus*), known as the "stilt," "bastard dowitch," "bastard yellow leg," "wood snipe," "blind snipe," "drum stick," "peep," and "frost snipe"; the turnstone (*Strepsilas interpres*, Illiger), known as the "brant bird," "calico bird," "chicaric," "chickering," and "sand runner." Besides the species enumerated are the avocet, stilt, oyster catcher, phalaropes, and a large variety of sandpipers—the latter known as "sand snipe" and "ox eyes," which are either too scarce or too small to occupy the attention of the sportsman.

Another bird belonging to the wading family is the Bartramian sandpiper (*Actiturus Bartramius*). It is known all over the United States as either the "grass plover," "upland plover," "field plover," "gray plover" or "humility." Unlike its brethren, it does not come to decoys. It is a very shy bird, and resorts to high, dry plains. Its favorite food is the grasshopper, and, when it is fat, no bird in America, not even the canvas-back duck, can compare with it for delicious delicacy of flavor. Sportsmen either shoot these birds out of wagons, or stalk them.

The last bird on the list is the pectoral sandpiper (*Tringa maculata*), commonly called the "krieker," "meadow snipe," "fat bird," "short neck," "jack snipe," "marsh plover," "grass snipe," "robin snipe," and "red back." In autumn these birds become very fat, and are then highly prized on the table. They can seldom be enticed by either call or decoys.

Squirrels.—There are four varieties of squirrels that may be regarded as game: The gray or black squirrel (*Sciurus Carolinensis*, Gmelin), which is found through the wooded portion of the United States east of the Missouri river; the Southern fox squirrel (*Sciurus vulpinus*, Gmelin), an inhabitant of the Southern States from North Carolina to Texas; the cat squirrel (*Sciurus cinereus*, Linn.), found in New Jersey and Virginia, and west to the Alleghanies; the Western fox-squirrel (*Sciurus Ludovicianus*, Custis), which occurs in the Mississippi valley. Squirrels are either shot by still-hunting or treed by cur dogs, and then killed on the limbs. When fire-arms are not at hand, the cruel practice of smoking them out of their hiding-places in hollow trees is often resorted to.

The opossum and raccoon are pursued for sport, and eaten, but they are not true game.

Turkey.—The wild turkey (*Meleagris gallopavo*, Linn.) is distinctively American, and is beyond question the most noble game bird of this country. The range of the turkey is confined now to the Southern and Western portions of the United States. It is the most delicious as it is the largest of all our gallinaceous game. At all times the turkey is a wary bird, and difficult to approach. They are shot either on their roosts, tracked on the snow and silently stalked, or, the flock being scattered by a dog, the hunter, by means of a "call," with which he imitates the cry of the birds, entices them within shot. All these various methods require considerable patience and skill to accomplish successfully. In Kentucky the wild turkey is being interbred with tame ones for marketable purposes.

Woodcock.—The American woodcock (*Philohela minor*, Gray) is perhaps the most highly prized of all game birds. It is more or less abundant in all the States east of the Mississippi river. In different sections it is known by various names, such as "blind snipe," "wood snipe," "timber doodle," "bog sucker," "night snipe," and "night partridge." It is migratory in the eastern portions of America. It lies well to a dog, and in the South is killed at night by fire-hunting. Its flesh is extremely delicious, especially in summer, when it finds an abundance of its choicest food. The snipe (*Gallinago Wilsonii*, Bon.), commonly known as the "English snipe," "shad-spirit," "jack snipe," etc., is a migratory bird, found at different seasons throughout North America. It is the only member of the snipe family that is hunted with dogs and lies to them.

Preservation of Game.—Many of the animals in the above list are protected during the breeding season by legislative enactments in most of the States in the Union. These laws, however, in many instances have never been enforced, and have become a dead letter. Thus it is that the different varieties of game are rapidly becoming depleted, and in some instances, as with the buffalo and elk, almost extinct in sections where only twenty years ago they were very abundant. The failure to provide laws for the protection of many varieties of wild fowl and waders, while making their spring migration, has caused them to become very scarce on the Atlantic coast. The improvement made in sporting fire-arms, and the very great increase in the number of persons that pursue game either for pleasure or profit—the rapid growth of the country, and the consequent clearing off of the forests and universal drainage of swamp-lands—have all tended to decrease materially the stock of game in the Northeastern section of the United States. Several varieties of game, notably the wild turkey and pinnated grouse, have either been exterminated in the Eastern States or driven back toward the western frontier. In some sections the increase of ground-vermin, and of hawks, owls, and crows, has been more than proportionate to the decrease of the game. Of the very large number of different varieties of birds, only one species, the common quail, has successfully held its own, and this is attributable to the immense spread of cultivation, and the consequent increase of grain-fields. Awakening to the fact that game is being depleted, the wealthy sportsmen of the country have been recently establishing preserves in all sections, and the present outlook points to America's rivaling Europe in this respect.

During the past few years an attempt has been made to acclimatize American game in Europe. A large number of elk, Virginia deer, pinnated grouse, quail, and wild fowl have been exported, and measures taken to cause their increase. With the exception of the mammals, however, the experiment has been a failure. On the other hand, the attempt to naturalize several varieties of pheasants and the English partridge in North America has borne satisfactory results.

While it is reported, on good authority, that the introduction of the pheasant has met with success in some dozen different localities in the United States, it is known that the most satisfactory results have been achieved in the vicinity of Puget Sound, and at Jobstown, Burlington County, N. J. At the first-named place four years ago a moderately large shipment of Mongolian pheasants was received. The birds on their arrival were found to be in excellent condition, and they were given a home on an island in Puget Sound. There they thrived to a wonderful extent. In two years they covered the island, and the overcrowding caused a large number of birds to go to the mainland and scatter over the surrounding country, where they are now found in considerable numbers. The introduction of the English pheasant and the English partridge on the estate of Mr. Pierre Lorillard, at Jobstown, N. J., occurred five years ago. The first shipments were destroyed by hawks and ground-vermin. Then Mr. Lorillard established a nursery for these birds by inclosing one hundred acres of wild land with a very high fence, and appointing keepers to feed and care for them. Since that time both the pheasants and partridges have greatly increased. At first their eggs were hatched out under domestic fowls, but in time the birds born here began to shift for themselves, and hatch and rear their own young, and as they increased in number they scattered over the surrounding country. This has been especially the case with the partridge, coveys of which were found last autumn ten miles distant from Mr. Lorillard's preserve. It has, therefore, been demonstrated that on both the Atlantic and Pacific coasts foreign game birds of the pheasant and partridge species will thrive and increase under natural conditions. It may be taken for granted that both the pheasant and the partridge will do well in the Middle, Southern, and Southwestern States, and on the Pacific coast, providing that for a year or two after their introduction they are protected from animals of prey and from pot-hunters. In the first instance, the parent birds must be cared for, but their young will soon learn to protect themselves from enemies, and thrive on the natural food of the section they inhabit.

Within the past eight years about fifteen thousand Messina quail have been imported to this country, and distributed in small lots all over the United States. A few of these birds have been known to breed in the summer season succeeding their introduction, but on the approach of cool weather both old and young birds were found to disappear suddenly, and since then nothing has ever been heard of them. By many sportsmen it is thought that they perished; still, some naturalists cherish the idea that they migrated to the Southern States, and adopted a home in a warm climate, remote from civilization, or in sparsely settled sections, where they have remained unobserved by the ignorant population.

GEOGRAPHICAL PROGRESS AND DISCOVERY. Africa.—The diplomatic negotiations concerning the Congo Free State, first instituted by King Leopold II of Belgium, have at last been concluded, and this great region of equatorial Africa has been recognized as an independent power by European governments and the United States, and its neutrality guaranteed. The negotiations with France and Portugal were somewhat protracted on account of the claims of those powers to the possession of parts of the territory that it was desired to include in the Congo State; especially was this the case in regard to the short strip of sea-coast at the mouth of the Congo, which seemed indispensable to the new state. Portugal claimed both banks of the river near its mouth, by right of discovery. An agreement with France was, however, arrived at on Feb. 4, 1885, by which that power gave up the claims in question, and received recognition of its right to the Kuilu-Niadi region, traversed by Savorgnan de Brazza in 1882. The final obstacle to the independence of the Congo State was removed February 14 by the compact with Portugal, whereby that power gave up its claim to the northern bank, and gained the long-sought recognition of its claim to the southern bank and the district of Kabinda. The new state as now organized has the narrow outlet to the sea at the mouth of the river from Banana to Yabe.. The boundary-lines then turn inward, and the northwestern corresponds mainly with the course of the Congo as far as Equator Station, when it passes still farther northward to include the region drained by the tributaries of the Congo, the line to be the yet undiscovered water-shed that separates the basin of the Congo from those of the Benue, the Schari, and the Nile. In the east the boundary follows the line of the western shores of the Albert Nyanza, Lutu Nzige, Tanganyika, and Bangweolo. The southern boundary is not fully settled, but the line turns westerly from the Bangweolo, and reaches the mouth of the Congo after two abrupt turns to follow the boundaries of Lunda and the Portuguese colony Angola in Lower Guinea. No change has been made in the boundaries of the free-trade territory, as settled by the Berlin conference.

The boundaries of the Congo basin are still to be settled, and much uncertainty clings to its supposed tributaries, in especial the Welle and the Kassai. An expedition to settle the question regarding the Welle, and to explore the water-shed between the Nile and the Congo, has been sent out by the Vienna Geographical Society, led by Dr. Oscar Lenz.

The German explorer, Lieutenant Wissmann, who entered the interior from the Loanda coast in the beginning of 1884, reached Stanley Pool July 16, 1885, having explored the southern drainage system of the Congo, and settled important points in the hydrography of the regions traversed. It appears that the Mfini, the outlet of Lake Leopold, flows into the Kwa after the junction of the Kassai and the Kuango. After his arrival at the Mukenge he located the station Luluaburg on the left bank of the Lulua, where he had the vessel, taken there in sections, put together, and ten large boats were made. He then set out down the Lulua; 48 carriers from Angola and 150 Balubas, among whom were thirty women and children, filled the ten boats and ten of their own canoes. After a three days' journey they reached the rapids of the Lulua, when they lost a few of the company. On the 5th of June they reached the Kassai; on the 16th they passed the mouth of the Sankuru. The Kassai becomes a very powerful stream, in some places reaching a breadth of three kilometres. Its banks are thickly populated. The region is rich in ivory, and there are great forests of India-rubber trees. In some places crowds of hippopotami bathing in the river almost blocked the passage.

The tribes met with up to the 24th of June were friendly; but at that time the Bakoutous were reached, and a series of conflicts began, like those that Stanley passed through on the Congo in 1877. The Bakoutous are a ferocious race; they attacked the expedition in a fleet of canoes, while the women hurled spears from the shore.

On the 2d of July the expedition arrived at the junction of the Kassai and Kuango, where the stream is not so deep, but has a breadth of nine to ten kilometres, strewed with islands.

The point where the Kassai flows into the Congo was determined to be some 400 miles below the point laid down on former maps, and the rivers mentioned above as flowing into the Kassai have been supposed to flow directly into the Congo. The Iruki, Lulanga, Ikelumba, and other rivers unaccounted for, probably enter a lake or swamp in the hollow of the great northern sweep of the Congo.

Balubas, from the upper Kassai, visited the station at Stanley Pool a few days after Wissmann's arrival. They are described by Harry G. Whitley, one of the Baptist missionaries, as tall and well made, the men tattooed all over in fine blue lines and curves, the women good-looking, with smooth, wholesome skins. They are sociable and jovial, accustomed to dance and sing the whole night, exceedingly inquisitive, but not thievish. Their ruler is a woman of striking and imperious presence. Their ideas of the Deity were derived originally from Portuguese missionaries, but are confused with fetich-worship.

Another explorer in the Congo region, Rev. G. Grenfell, reports important work in the exploration of the Mobangi, a northern tributary, which, according to his report, must be one of the most important of the branches of the Congo, affording a longer water-way than any other yet explored, and carrying an immense volume of water. Mr. Grenfell, who is a Baptist missionary, ascended the river in the missionary steamer "Peace" as far as 4° 30′ north latitude, a distance of over 400 miles. Measured near that point, it was found to be 673 yards in width, and its mean depth 25 feet. He is inclined to believe that it is the lower part of the Welle, whose course and destination have been so far vainly sought for.

On his way up the river Mr. Grenfell met with some hostility from the natives, but on his return he found them friendly and generous. He reports that the banks are more densely populated than those of the Congo, and the resources of the country seemed to him richer. This view finds support in Stanley's opinion that the region north of the Congo would prove the most productive part of Africa, and in Joseph Thomson's, regarding the superior resources of the Niger region. This would make the most valuable part of the continent a belt extending from the equator to north latitude 10° 15′. Mr. Grenfell also made excursions up other of the Congo tributaries, the Lefini, the Nkenye, the Ukere or Loika, and the Ikelemba. The waters of the last were strongly impregnated with iron.

According to the reports of the expedition of the French officer Giraud, the Bangweolo source of the Congo is considerably smaller than it has been represented, and is of an irregular, roundish form, with a great swamp-region adjoining it on the south.

The National Geographical Institute of Brussels publishes "Le Congo au point de vue économique," by A. J. Wauters, giving an account of the resources of the Congo basin, founded on the reports of explorers and officers of the association.

The French Government is busily pushing forward operations on the Senegal and the Niger. An ambassador from the Emir of Timbuctoo was sent in September, 1884, to St. Louis, in Senegambia, to treat with the governor concerning a commercial compact, which will probably result in the diversion to Senegambia of a large part of the trade that has heretofore taken the route to Morocco.

The trading-houses that have sprung up for the trade on the Niger show the rapid development of business there. In 1880 Count Semellé called the attention of French merchants to the opportunities for trade in that region, where the United African Company then enjoyed a monopoly. Within the four following years two French companies had established thirty-four stations on the Niger and Benue, while there were thirty-four belonging to the United African Company, and two established by colored merchants from Lagos. At the beginning of 1885, the United African Company bought up the stations and ships of the French companies, and thus set aside competition once more.

Joseph Thomson has returned from his expedition up the Niger, where he was sent by the African Company to make treaties with the sultans on that river and the Benue, securing the trade to that company. The Sultan of Sokoto he describes as a man of much intelligence, who seemed delighted at the prospect of having dealings with England. The people are Mohammedans, and the country seems fertile and not unhealthful.

Eduard Robert Flegel, the German explorer of the Benue, was sent out, in the interest of a German trading company, with a little steamer, the Heinrich Barth, to make arrangements for securing trade on those rivers. Difficulties have arisen, however, on account of the monopoly sought by the former company.

The Batanga or Moanga river, just south of Cameroon, was explored in March by Dr. H. Zöller, who found a waterfall ten metres in height about thirty-two kilometres from the coast, called Neveu-du-Mont Fall. He learned from the natives that water communication was made from this place with the Edea by means of the Nepembe creek, so that the natives could reach Malimba in three days by that route. He found the whole territory between Malimba and the Moango a low and uninhabited country. The work of Dr. Zöller has resulted in the addition of considerable territory to the German colony, including the whole Cameron Range and the coast to the Rio del Rey, with the exception of the little domain belonging to the English mission station Victoria.

A French expedition for exploring the Algerian Sahara journeyed in a southerly and southeasterly direction to the oasis Besserof, and from there, by way of Nefzaua, to the Mediterranean. Numerous remains of mason-work were found, indicating the existence of a prehistoric people.

Some five years ago the Geographical Society of Berlin organized and sent out a company of specialists for scientific research in East Central Africa. It was one of the most expensive expeditions ever sent to Africa, receiving an annual appropriation from the Government. For nearly three years its members have been studying the country in the region of Tabora, about two hundred miles east of Lake Tanganyika. With the exception of Capt. von Schöler, the zoölogist, who accompanied the expedition only to Tabora, the whole company of Europeans have lost their lives in the undertaking. Dr. Böhm, the naturalist, and Paul Reichard, civil engineer, the only survivors on the 1st of September, 1883, had at that date reached Mpala, on the western shore of Tanganyika, and, passing to the southwest, reached the Luapula on the 27th. A month later they arrived at Katanga, mentioned by Livingstone, Cameron, and Giraud. They visited the Lufira, the principal tributary of the Lualaba, and in January, 1884, went to Urua in company with the troops of Msiri, chief of Katanga, who was at war with Kassongo, chief of Urua. On February 4 they discovered, southward from Cameron's Kassali or Kikondscha, a considerably larger lake, Upāmba, which may be identical with the Lake Lohemba of Cameron. If so, it was incorrectly located.

Not far from this lake, near Katapena, a place where sulphur-springs are found, which was besieged by Msiri, Dr. Böhm died on March 27 of an attack of fever. Reichard then started southward to find the sources of the Lualaba and the Lufira, but was forced to return after a few days by the hostility of the Warambas, the inhabitants of Iramba. Msiri also turned against him, and he was forced to withdraw to the Tanganyika. Sept. 25 he examined the rich copper-mines near Unkäa, and crossed the Lufira and the pass of the Kunde-Irunde mountains. Deserted by the guides, the expedition wandered for a month through the wilderness, contending with hunger and the hostility of the natives, till at length, on October 15, the old route was found, and the explorer started for the coast. A report has been received that he was killed while on his way by the natives of Ugogo. But the results of the expedition have not been lost, since Reichard's maps and reports have been received in Europe. The region traversed formed a gap between those explored by Livingstone, Cameron, and Giraud.

The British consul at Mozambique, H. E. O'Neill, is said to have rendered great service by his tireless exertions in exploring the country lying about him and the coasts, in which he has discovered numerous bays of more or less importance in a commercial point of view. His observations have been made very carefully and scientifically, and will occasion important corrections of the map.

A steamer has lately been placed on Lake Tanganyika, the "Good News," sent out in sections by the London Missionary Society. The Victoria Nyanza was already supplied with one, the "Eleanor," and the Nyassa with two, the "Ilala" and the "Ch. Janson."

The German Government has met with some resistance from the Sultan of Zanzibar in its efforts to extend a protectorate over the lands discovered under the auspices of the German East African Company—Usagara, Ukami, Nguru, Usegua, and Witu. The sultan, however, withdrew his opposition on the appearance of some German ships of war and the reception of an ultimatum from the officer commanding, and he has recognized the protectorate and ordered his troops out of the disputed territory. Other districts had been added to the discoveries of the company before the appearance of the fleet—Chutu, as far as the Rufidschi, discovered by Count Pfeil, and by Dr. Jühlke and Lieut. Weiss, some districts reaching to the southern foot of Mount Kilimandjaro. The sultan has claims on the latter districts also, based on alleged compacts with their chiefs. But for the neighborhood of the ferocious Massai these districts are said to be well adapted for colonization.

The Portuguese explorers, Hermenegildo Capello and Roberto Ivens, have traversed the continent from west to east, exploring the headwaters of the Zambesi and the Lualaba, much of the country passed over being heretofore unexplored. They reported that the Cubango is a tributary of the Zambesi, and the Luapula the chief branch of the Lualaba, and that a country called Garanganja is rich in deposits of copper. Eighty of one hundred and twenty men who accompanied them died on the route.

The exploration of the Juba or Dschub river, which enters the Indian Ocean near the equator, in attempting which the explorer Decken lost his life in 1865, and which was vainly attempted by Revoil in 1884, is to be undertaken by the Italian traveler Cecchi.

The Italian explorer Bianchi, who undertook to open a direct route between Abyssinia and the Assab Bay, for the benefit of the Italian colony, was surprised by the Danakil when but two days' journey from the Abyssinian border, and he and all his companions were murdered. The Italian Government, in consequence, resolved on the military occupation of Assab, and sent thither a squadron of six ships and a regiment of soldiers for the better protection of their colonists. Bianchi's book, on his journey through Abyssinia and Schoa to Soddo-Galla, appeared almost simultaneously with the announcement of his death.

Much anxiety has been felt concerning Dr. Junker, Capt. Casati, Emin Bey, and Lupton Bey, explorers who were on their way to find the course of the Welle, and were reported to have been taken prisoners in the country of the Mahdi; and an expedition was projected, to be led by Dr. G. A. Fischer, with the object of relieving them. Later advices reported the supposed prisoners safe at Lado, on the Upper Nile, beyond the country of the Mahdi.

Most of the recent explorers of the continent are of opinion that its resources in most parts are scarcely worth developing. Dr. Fischer, in his "More Light on the Dark Continent," gives some statistics. The total value of the ivory export is only £800,000 a year, and in not many years that will be exhausted. The virgin soil of Africa can not even grow European vegetables without being heavily manured. The caoutchouc of Africa is worthless for many manufacturing purposes, and is also being rapidly exhausted. Coffee grows well in some places, and might be made something of; but even that in the Gaboon has come to nothing after an expensive experiment of seven years. African gum-copal is being put out of the market by Australian; orchilla will soon be superseded by a chemical preparation; oil is decreasing in price; of minerals there are none worthy of attention for export. Even if the resources of Africa were all that optimistic explorers decribe them to be, Dr. Fischer maintains that they could never be developed by native labor, unless that labor were forced. Central Africa, he maintains, can never be colonized by Europeans, while the native will never work unless he is compelled to do so.

Dr. Fischer probably takes too gloomy a view of the conditions of Africa, and certainly his statements do not apply to the Niger region. But they surely do to Angra Pequeña, which has just been pronounced a desert, while Dr. Lenz, who touched at the Cameroons on his way to the Congo, gives a very gloomy account of that German annexation.

The French engineer Angelvy has examined the banks of the Rovuma and the Lujende for coal, and reports rich fields there, although the tests were carried but a short distance below the surface. Still, the cost of transportation would be so heavy that the coal-fields can not be utilized at present. This report is directly contradictory to that of Joseph Thomson, who, in 1881, was commissioned by the Sultan of Zanzibar to examine that district for coal, and reported that there was none worth mining.

The question of the disputed claims of the various European governments to territory in Africa may possibly become serious in time, especially should the resources of the continent prove more valuable than recent explorers seem disposed to regard them. A number of points on the western coast are claimed by both France and England; France and Germany lay claim to Malimba, south of the Cameroon; France and Spain to the region at the mouth of the Muni; and to regions farther south there are conflicting claims by all these powers and Portugal. The Spaniards have taken possession of the coast of the Sahara, from Cape Bajador in the north to Cape Blanco in the south, and have placed there three stations as places of supply for the fishing flotilla of the Canary Isles, and stations for the sending of trading expeditions among the Berber tribes of the western Sahara.

The work of African exploration has sustained a great loss in the death of Dr. Gustav Nachtigal, who died at sea, April 19, of malaria contracted during his travels, at the age of fifty-one. He was one of the most successful of discoverers, his work being mainly in the region of eastern Soudan.

Asia.—The report of the Indian Survey Department for 1883–'84 shows a great amount of work accomplished, much of it in countries subject to native princes, often hostile, and never disposed to aid explorations in any way. The report of the survey of the Takht-i-Suleiman, in Afghanistan, shows the difficulties attending that part of the work: "At Pazai the force faced the western side of the mountain, nearly opposite the southern Takht peak, and a small narrow path up a steep spur leading to a defile through the stupendous cliffs that surrounded its summit showed the way to the top of the mountain. Such a pathway would have been difficult enough at any time, but it was now held by the Kedarzai section of the Sherani tribe, who had built formidable 'sangas' and other barriers across the defile, and were prepared to defend it to the last extremity. A survey reconnaissance, however, assisted by the local knowledge of the Bozdar, led to the suggestion that another way up might be found by making a long flanking movement to the southern end of the mountain, following the course of a nullah, the head of which must clearly be found under the edge of some rather more accessible-looking but still precipitous cliffs that could be seen through the telescope in that direction. But as such a movement would have no chance of success unless by way of a surprise, and as Sherani guides were not to be depended on, it devolved on the survey officers to show the way in the dark. Accordingly, with the help of the trusty old Bozdar, I offered to guide a flanking party to the summit of the mountain by night, and to turn out the Kedarzais, if possible, by daybreak. It was a long and anxious night's work, stumbling almost blindly along the bed of a nullah full of bowlders and fallen trees, and as day dawned we just found ourselves on the summit without having fired a shot, but still a long distance away from the head of the Pazai Kotal. It was then difficult to determine what course to pursue. There were two ways leading to the Kedarzai position—one along the edge of the cliffs, which might easily prove impracticable, and another which was an obvious hill track, and which the Bozdar rightly surmised led from their position to the Kedarzai village in the plains below. We followed both; the main body of the force took the road, and a smaller party of the First Sikhs, which I accompanied, pushed their way along the cliffs. The latter were the first to reach the Kedarzai position, coming suddenly to a point commanding it just as the front attack from below was beginning to develop. It needed but one volley from the advanced guard of the Sikhs (about fifty men) to scatter the whole Kedarzai force." The height of the mountain Kaisarghar was found to be 11,300 feet above the level of the sea.

The Zhob Valley Expedition surveyed 6,000 square miles in southeast Afghanistan, hitherto unexamined.

Sir Robert Sandeman's expedition took the region of the Kharan Desert in southwestern Beloochistan. One great difficulty experienced was that of finding camping-places convenient to supplies of fresh water, much of the water in the region being salt.

Mr. Roberts worked in and about Sikhim on the Himalayan frontier, and the report of his expedition furnishes new details concerning the great mountains of the range. A full description is given of the famous lake of Thibet, called by the natives Yamdok Cho, or Scorpion Lake, but known to us as Lake Piahte or Palti. The native name is given on account of the resemblance of the lake in shape to a scorpion, and the explorer thinks the Thibetans must have had maps of the lake to discover the resemblance. It is described as exceedingly beautiful, surrounded with mountains except at the east, where the lake is entered by a tributary which drains the "Starry Plains," or "Plains of Heaven"—a great extent of rich pasture-land, covered with cattle, horses, and beasts of the chase. Villages and monasteries nestle around the shores at the foot of the mountains, and one of the most beautiful views of the lake takes in a small island with a monastery near the southern shore.

A map of the lake has been made by the Lama, a native explorer connected with the survey. He describes the climate of Thibet as delightful in summer. The land is covered either with crops or with luxuriant, waving grass, or velvety turf. Streams flow in every valley. In winter the cold is intense, and biting winds sweep over the land incessantly, filling the air with dust, and whistling through the ill-made doors and windows. The natives are averse to taking animal life, and consequently game is very abundant.

Still further particulars regarding Thibet have been gathered from the Pundit A—— K——, who made a four years' journey through eastern Thibet, having been instructed and sent out by the English. He carried through his work with great care and faithfulness. Though more than two years have passed since his journey was finished, his reports have been kept from publication by the Indian Government, for political reasons. A report has, however, been prepared by the deputy surveyor-general in charge of the surveys of India from the answers made by A—— K—— to questions put to him in person. He thus describes Lhása, the capital of Thibet, on the Ki Chu river:

> Even here the dwelling-houses are interspersed with religious edifices; of the latter the most prominent, on the right, is the handsome temple of Jhio, glittering with four Gebis, while to the left is Giang Bunmoche, surmounted by its gilded spire, crescent, and globe, and still farther north Ramoshe, a temple capped by a single glistening Gebi. Between these objects and almost in contact with them lies the lay city of Lhása, composed of houses two or three stories high, touching one another, and crowded everywhere by Thibetans (Bodpas and Khampas far in the majority), Chinese, Nepaulese, Kashmiris (including a few Mohammedans from Hindostan, chiefly from Patna), and Mongolians. Of all these nationalities the Thibetans, or natives of the country, alone have their women with them, excepting a few instances of traveling Mongolians who may be accompanied by their wives between the arrivals and departures of "kafilas." This part of Lhása, or the city proper, covers an area of less than half a square mile. The houses are two or three stories high and mostly in blocks, around a quadrangle that is open above and is entered by a side doorway; as said, they touch one another, and are crowded with occupants, who live peaceably in contiguous dwellings, differences of race and customs notwithstanding. The roofs are all covered in with earth, and this is a sufficient protection against the small rainfall, which comes down mostly in July and August. The city at all times contains a large number of traders with goods from various directions, including Hindostan. The article most largely imported is tea, which is brought almost exclusively from China, and is always made up in the form of bricks. Manufactures in Lhása itself are few and only small in amount, the curing of skins being about the most important. There is also a fragrant slow-match, called "poi," made here solely by the "dabas," or priests; it emits a perfume in burning, and is in common use by rich and poor alike. The water for the city is brought down from the north in two canals, which, however, in their progress through the city are subdivided into many streamlets; these rills feed several shallow wells for the use of the people, and eventually discharge their surplus to the south at Yutsk Jampa, where, A—— K—— adds with emphasis, the water is no longer nice.

Poto La is west of Lhása, and "presents an enormous pile of lofty buildings, covering a rectangle of about four hundred yards in length by some two hundred yards in width, surmounted at intervals by five gilded Gebis (like a square tent with a single pole) which, sparkling in the sunlight, present a dazzling and gorgeous spectacle, visible for miles around. This celebrated monastery is not only the residence of the great Lamas (Dalai Lamas), or chief priests of the Buddhists spread over Great Thibet and Mongolia, but it contains the remains of all the Dalai Lamas deceased for centuries past. The buildings form one solid block, rising to various heights, at different places representing sometimes as many as seven stories or floors. They contain various images. The monster image to the god Jamba is represented as of prodigious dimensions. The figure is internally of clay, and is well gilded externally. It is seated on a platform on the ground-floor, and its body, passing successively through the second and third floors, terminates in a jeweled and capped monster head above the latter floor. In all, the figure and platform are said to be seventy or eighty feet high. The Dalai Lama is thus described:

> As to the Dalai Lama, never dying yet being successively buried and born anew, he is installed in Poto La, so veritable an infant that his mother necessarily accompanies him in order to suckle him, but, being debarred from the sacred premises of the Poto La on account of her sex, she is lodged in the vicinity at Shyo, and is permitted to visit her son only between the hours of 9 A. M. and 4 P. M. Whatever accomplishments he may acquire, the Dalai Lama need never exhibit them, for he is taught to be chary of speech, and, indeed, necessity compels this course, since his worshipers are in thousands, and it is only to those who are wealthy or of high degree that he can afford to address even a brief sentence or two. This is always done in a deep, hoarse voice, acquired by training, in order to convey the idea that it emanates from maturity and wisdom. Seated cross-legged on a platform some six feet high, he is dressed to be worshiped in the usual colors of the priesthood (i. e., red and yellow), and with bare arms, as required of all Buddhist priests, and holds a rod, from the end of which hang strips of silk, white, red, yellow, green, and blue. The pilgrim coming in at the entrance-door advances with folded hands as if in prayer, and, resting his head against the edge of the platform above him, mentally and hastily repeats the petitions he would have granted. These unuttered prayers the Dalai Lama is understood to comprehend intuitively. He touches the pilgrim's head with the bunch of silk in token of his blessing, and the worshiper is hurried out at the exit-door by attendants, only too happy if he has passed, say, half a minute in the vicinity of the great priest. This is the common procedure. Persons of rank or substance are permitted to mount the platform and to perform obeisance, there receiving the required blessing by actual touch of the Dalai Lama's hands; subsequently such worshiper may be allowed a seat below the platform, where a few hoarse utter-

ances of inquiry may be addressed to him by the Dalai Lama, and he may be also given some food.

Polyandrism still prevails, though it has declined to a large extent in the cities. The people are very social, and fond of dining in great companies in the *sakhangs*, or hotels, some of which in Lhása can accommodate two hundred people at one time. They drink a fermented liquor from babyhood up, but are seldom drunk. In summer they are fond of picnicking under the trees throughout the long days. Notwithstanding their social tendencies, the citizens manage to pick up a comfortable living, chiefly by trade, and besides, to observe the requirements that residence in the holy city imposes. Lhása is encircled by a road. This is broad and well made, and defines the limits within which all those must reside who wish to make sure of a happy state hereafter. This road is called Ling Khor; within its circuit no blood may be shed, and so the butchers and slaughter-houses are placed without. The day is recognized as begun when a loud report, as if from a cannon, issues from the vicinity of the Amban's residence. This happens about 4 A. M., and also at 9 or 10 P. M. After the morning report the people are to be seen in dense crowds on the Ling Khor, all moving in one direction, as the hands of a watch, as laid down by their religion. A similar circuit is made by the devout in the evening, to say nothing of smaller circuits around Jhio (called Bar Khor) and other shrines. At least, this is imperative on common folk. As to the great and wealthy, they urge that their presence would only interfere with the piety of the people, so they engage substitutes, who, however, are rigorously required to circumambulate for their masters. But, whether it is done in person or by proxy, a careful reckoning is kept of the number of circuits performed.

Among the geographical problems sought to be solved in Thibet are those relating to the headwaters and water-sheds of the Irrawaddy and the Brahmapootra. Inferences from the account of A—— K—— make it probable that the water-shed of the Irrawaddy is the Zayul-Khanung range of mountains, and that the Sanpou river is identical with the Dihang, one of the largest tributaries of the Brahmapootra, though the river has not been followed for its entire length, the upper portion having been known as the Sanpou and the lower as the Dihang, if the inference is correct.

The roads of Thibet are infested with robbers, known as Dokpas, or dwellers in black tents, who roam about in large bands, offering to trade and seeking opportunities for plunder, so that it is customary for travelers to go in companies, all armed with spear, matchlock, and sword.

In January Col. Woodthorpe made a journey across the water-shed between the Brahmapootra and the Irrawaddy, in the land of the Singpo. Crossing by a pass 8,000 feet high, he entered the territory of the Bor Khamptis, on the northern Irrawaddy, which has not been reached before since Wilcox's journey in 1827; here he turned back to avoid being detained by high water. The land is well cultivated, and opium is raised in large quantities. The capital is Pedan. The silver-mines northeast of the capital are worked by the Khamungs, a half-subject race.

The latest report from Col. Prejevalski gives accounts of his movements up to the 1st of July. He could not enter Thibet over the Kerige mountains, because the Chinese had blockaded the roads and destroyed the bridges; and the horses could not cross by the passes. With the exception of the Chinese, he found the people friendly to Russia. He hoped to be able soon to cross the mountains between the Keri and the Chotan, and follow up the Chotan.

Gold has recently been found on the Chinese side of the Amoor in such abundance that the name "New California" has been applied to the place. The gold-fever has spread so that several thousand workmen are already gathered. They have chosen officers, have a strict system of lynch law, and punish a revolver-shot with 200 lashes.

The opening of Corea to foreigners has been taken advantage of by explorers, among them the German geologist, Dr. C. Gottsche, and the English vice-consul, W. R. Carles. The report of the latter gives many particulars regarding the products and commercial values of the country, as do also A. W. D——'s "Notes on Corea."

An examination of the Malayan Peninsula has been made by the engineer F. Deloncle, who passed from Singira on the east coast to the lagoon Tale-sab, separated from the Gulf of Siam by the island of Tantalem, reached the water-shed of the Luang mountains along the river Klong Talung, and arrived by way of the Tsang at the Bay of Bengal. His examination of the rock-formations indicates the presence of gold, tin, and iron-ore.

Merchants interested in the Siberian trade still continue their attempts to establish a practicable route by sea between Siberia and Europe, notwithstanding the ill-success of former efforts. A petition sent in to the Government by a number of houses interested in the trade asks that all wares taken into Siberia through the Polar Sea be made free of duty. Alexander Sibiriakoff, who is constantly working for the progress of Siberia, has interested himself in these attempts to establish communication by sea, as well as in the new route over the northern Ural. In July he started from Archangel in his steamer, "A. E. Nordenskiöld," but met with such compact masses of ice in the Kara Sea that he was obliged to return in the middle of August. His other steamer, the "Obi," had taken a cargo to the Petchora, from which it is to be transported by the new route over the Ural to a tributary of the Obi.

The project for concentrating on the island of Saghalien the criminals sentenced to hard labor in Siberia, is severely criticised, principally on the ground that the island is unable to support a penal colony like that proposed. In a report made in 1882 it was said that 1,030 *desjatin* were under cultivation in northern Saghalien, and several thousand more were to be taken up the next year; but the official report of Surveyor Karaulowskij reports only 510 *desjatin* in the beginning of 1884. There are 700 families of former convicts already there, who can scarcely live upon the poverty-stricken soil; and 560 men were to be settled there during the year as colonists. The condition of the criminals in the prisons is made especially miserable by want of discipline, by violence, and deficient support.

The presence of the Russians is said by the author of a book of sketches of travel, "Kolymsk to Yakutsk," to have made a remarkable change in the population on the Indigirka. Tribes once numerous there have retreated to the mountains, and epidemic diseases which have broken out among them have extended to the Russians. The city of Saschiwersk is completely deserted. At the end of the seventies it was an inhabited place. The greater abundance of fish in the lower courses of the Kolyma, Indigirka, and Yana, has also had a tendency to draw the population northward. Some of the tribes have been impoverished by diseases among their cattle, and have been driven from their homes by the necessity of seeking a living in some other way—as fishers, hunters, or ivory-seekers, in a half-nomadic existence. The region of Kolymsk was lately for six years without a single physician. The post-routes are so infested by lawless Cossacks that the finest meadows and fishing-places near the roads are left unused.

Arctic Regions.—Very little has been done in 1885 in the way of Arctic exploration, though some books and articles of interest on recent expeditions have been published. The schooner "William Barent," which has made an Arctic voyage every summer since 1878, made none this year, it having been decided to collect funds for a steamship instead.

But an expedition was sent out in 1884 from Denmark to examine the coast of East Greenland, consisting of Capt. G. Holm, Lieut. Garde, the Norwegian geologist Knutsen, and the botanist Eberlin. The work began in the spring of 1884, and the explorers reached Copenhagen in October, 1885. Notwithstanding the unfavorable condition of the ice in the early summer of 1884, the travelers reached a point much higher than that touched by Capt. Graah, in 1829. This stretch of coast was taken possession of as Christian IX. Land. The explorers built a cabin for winter quarters not far from Cape Dan, in the midst of a native population of about 400, whom they found in a more primitive condition than the west Greenlanders at the arrival of Egedes in 1721. They found no ruins of the old Icelandic colony "Österbygd," although they examined all the fiords throughout the region. The reports of the expedition will fill a gap in the knowledge of the geography of Greenland, and furnish interesting scientific facts, especially in the department of ethnography, since the ten months' sojourn among remote tribes of heathen Greenlanders gave opportunity for close observation of their mode of life.

Much doubt has been expressed as to the new islands discovered in the Spitzbergen Sea in 1884, by Johannesen and Andreassen. It was thought that, if they were there, they could not have been overlooked by other seamen; and that as King Karl Land was described in 1872 as rising in three hills, which looked like separate islands at a distance, the supposed islands might be only the two easterly hills. But the positive assurances of the two navigators and their crews that no such mistake could have been made, as well as their descriptions, which do not apply to King Karl Land, leave little doubt of the reality of the discovery.

According to the report of Dr. F. Boas, on his researches in Baffin Land, some changes will be necessitated in the maps of that region. Home Bay, particularly, which has been supposed to extend far inland, disappears almost entirely. This is not strange, however, since the maps are based on observations made from ships some 37 kilometres from shore, nearer approach being barred by the masses of ice that pass along this coast on their way to Davis Strait.

During the year an important supplementary volume to the work on the Vega Expedition has been published by Von Nordenskiöld, through Brockhaus in Leipsic, "Studies and Researches occasioned by my Travels in the Extreme North." It is made up of chapters by Nordenskiöld and his co-workers, giving the scientific results of their observations—botanic, geologic, zoölogic, and sociologic. The third section is devoted to Nordenskiöld's favorite theme—the geologic significance of the fall of cosmic matter on the earth. His theory, if accepted, would cause a complete revolution in the science of geology as it is now understood. It is that the earth has been formed in the course of ages by the aggregation of cold and mostly solid cosmic particles.

Other books that have appeared during the year on Arctic discoveries are G. W. Melville's "In the Lena Delta," and "The Rescue of Greely," by W. S. Schley, commander of the Relief expedition, and Prof. J. R. Soley, of the United States Navy.

Lieut. Greely believes that the route by Franz-Josef Land is the one that offers the greatest number of favorable conditions for the prosecution of Arctic research—a safe harbor, ice smooth and sound for sledges, game in tolerable abundance, and a chance for escape in case the ship has to be abandoned.

Central America.—In the spring of 1885 a party of American travelers made the ascent of the volcano Irazu, in Costa Rica, 11,500 feet high.

After describing the magnificent panorama they enjoyed on reaching the crater, one of them writes:

> We plowed through the ashes that were almost up to the horses' knees toward the crater of the volcano which yawned on the opposite side of the peak. Following the crest of a ridge of pumice-stone and ashes, which had been thrown out in ages past, and were as regularly piled as if the hands of men had dumped them there, we looked down on one side into a gorge 3,000 feet deep, to the foot of which a stone would roll without meeting an impediment, and on the other into a basin formed by the mountain-side, and the heaps of ashes that lay in a regular windrow around it, a basin about 500 feet deep and a quarter of a mile across from the top of one bank to the top of the other. The bottom was honey-combed with craters, where it looked as if the earth had broken through in irregular circles. There were seven or eight of these craters, some of them centuries old, the last and largest having opened within the memory of living men. The older ones were black and half filled with ashes cast from those of later origin, while the "new one," as the guide called it, perhaps a quarter of a century old, was bottomless as far as we could see, and its walls were yellow with sulphur and white with half-burned limestone; the ashes were fresh and crisp, and there were no signs of vegetation for a distance of a thousand feet or more down the outside bank, against which the wind was constantly blowing, and where one would think it would lodge dust and seeds from the forests so near and numerous. The wall of ashes arose at least 500 and in some places 600 feet around the crater, and the guide, who said he had visited the place at intervals during the last thirteen years, said that most of them had accumulated since the last eruption, six years ago.

North America.—The surveying party sent out to explore Lake Mistassini in Labrador have completed their work successfully. The lake proves to be considerably smaller than has been supposed, having a length of 120 miles and an average breadth of 20 miles. It contains several islands nearly as large as Orleans Island at Quebec, on some of which are large lakes. The Indians are supplied with prayer and hymn books and Testaments, printed in the Cree language, with characters resembling stenography, prepared by Bishop Horden, of Moosonee, whose headquarters are at Moose Fort on James Bay.

The Arctic steamer "Alert" arrived at Halifax Oct. 18, bringing back the party of observers sent out by the Dominion Government last year to make observations in Hudson Bay and Strait. The object of the expedition was to ascertain whether that route to the ocean could be profitably taken by the commerce of the Northwest. The temperature was found to be higher than was expected; the lowest monthly average was 30° below zero. As regards the movements of the ice, the season was later than usual. The steamer stuck for three weeks in a field of ice that came down from Davis Strait, and had to be sent to St. John's for repairs. It afterward passed through the floating ice coming down from Hudson Bay without unusual difficulty. Three sailing-vessels during the time passed directly on through the center of the strait, but the "Alert," having to relieve men at various points along the shores, met with more difficulty from the ice. Although the movements of the ice vary greatly from year to year, it is believed that the bay and strait can be navigated without danger from July to October by vessels properly built. The mineral wealth of the region is said to be very great, comprising gold, silver, copper, lead, iron, asbestus, manganese, mica, graphite, lazulite, and anthracite coal. The fisheries also and the fur-trade, hitherto monopolized by the Hudson Bay Company, offer great possibilities for the future.

A new map of the Northwestern Territories of Canada and the province of Manitoba, published at Ottawa, shows some considerable changes from former maps in the hydrography of the provinces of Athabasca, Alberta, Saskatchewan, and Assiniboia, as well as in the region between Lake Winnipeg and Hudson Bay.

Lake Itasca, which has been distinguished as the head of the Mississippi river for fifty years, must, it seems, yield that distinction to a small lake about a mile and a half in length by a mile in width, lying farther south, discovered by Capt. Glazier and named for him. Lake Itasca is composed of three arms, extending in the form of a trefoil, having a length of five miles and an average width of a mile and a half. The upper or southern end of its middle arm apparently terminated in a swamp, which might easily have deceived any one not familiar with the country. But Cheno-wa-gesic, Capt. Glazier's Indian guide, who had for years used the region of these lakes for his hunting-grounds, readily made his way through the reeds and rushes at the mouth of the connecting stream. Lake Glazier at its outlet presents another barricade of reeds, through which the party made their way in their canoes. The connecting stream is small and swift, and Lake Glazier, which has an elevation of perhaps three feet above Lake Itasca, is not swampy, like other small lakes in the vicinity. The shores are rocky and wooded, and the waters, fed from springs, are clear and pure. It would be nearly a perfect oval, but a rocky promontory that projects into the southern end gives it the form of a heart. A small stream flows into the lake on either side the promontory; the western and longer one has been named Excelsior creek, because it brings down the highest waters of the river; the other, Eagle creek, partly from patriotic considerations, partly because large numbers of eagles were seen about it. A third stream, Union creek, enters the lake near its outlet.

Several parties of explorers have been at work in Alaska this year, following up the principal rivers and examining the resources of the country. The most important is that undertaken for the exploration of the Copper river, under the direction of Lieut. H. J. Allen. He was accompanied by Sergeants Robinson and T. W. Fickett, of the United States Signal Corps. The party ascended the river to its source, 500 miles, and examined some of its tributaries. Along its upper course are several active volcanoes, described as capped with snow, lined with ice, thousands of feet high, and presenting a magnificent spectacle when in a state of eruption. After examining the Copper and its tributaries, the explorers crossed the Alaskan range, and traveled for 800 miles along the course of the Tannak. Then crossing by a portage to the Kuokuk, they descended that stream 750 miles to the Yukon, which they followed to its mouth. having spent eight months on the journey.

Small bands of Indians were found scattered about the region visited, who gain a precarious living by fishing. Copper and iron abound; small deposits of gold and silver ore were discovered; a good quality of coal that was found gave indications of being abundant. Several new fossil animals and one new living species, a kind of sheep or goat, were found by Lieut. Allen. His report, with the maps and charts of the region, will be of great value.

Another party of explorers were taken to Alaska in the spring by the United States revenue cutter "Corwin" from San Francisco, and returned in October. The explorers divided into two parties when they arrived at Hotham Inlet. One, under the command of Lieut. J. C. Cantwell, went up the Korvak river in a steam-launch as far as the rapids. The remainder of the stream had to be ascended in skin boats, and even that was done with difficulty. About 100 miles up was a gorge with perpendicular walls, in some places 600 feet high, through which the water rushed with a deafening noise. Beyond the gorge the stream widened again, and, following it up, the explorers found its source to be a large lake surrounded by high and steep mountains. Several smaller lakes were connected with it. A portage was found connecting the Korvak with the Koyoukuk, a branch of the Yukon.

The other expedition from the "Corwin" was made by Engineer S. B. McLenegan, who passed up the Nortak, the most northerly of the streams explored, in a skin canoe, attended by one seaman. About 250 miles from the mouth of the river they found it passing through immense gorges or cañons 1,000 feet in depth. They penetrated 400 miles into a region not known to have ever been explored before, entirely within the Arctic Circle.

South America.—Mount Roraima, on the border between Guiana and Venezuela, has at length been successfully ascended. Everard Im Thurm reached the summit in December, 1884, from the southern side (see "Annual Cyclopædia" for 1884, page 539). His report is contained in the August number of the proceedings of the Royal Geographical Society. The ascent is attended with great difficulty. The plateau of the Roraima produces nothing that will serve for food. The summit, 2,600 metres in height, is a desolate sandstone waste. With the exception of a few swamps in clefts of the plateau, there is not a trace of plant-life. The masses of water that fall from it form numerous waterfalls, and subterranean streams break out here and there from the sides.

Recent exploration of the head-waters of the Ucayali river in Peru, by the engineer Samanez, promises to result in improved facilities for communication in the region of the upper Amazon, and open a convenient waterway for the export of the ores from the province of Cuzco.

According to the truce between Chili and Bolivia of Nov. 29, 1884, the territory of Mejillones remains in possession of Chili. The boundary extends from the source of the Rio Loa, at the volcano Sua, across the lagoon of Ascotan and the summit of the volcanoes Cabana and Licancaur to Sapalequi or Sapalesi.

The Indians having been driven from the southern pampas of the Argentine Republic southward over the Rio Negro, the region is partly open to settlers, though the neighborhood of the Indians makes it not altogether safe for colonists. A thorough investigation of the country was undertaken by the Minister of War Victorica, who sent out three large parties for exploring, surveying, and examining the minerals, plants, and animals of the entire region.

An examination of the west coast of Patagonia, by Capt. Serrano, of the Chilian service, shows that the Fallos and Picton channel affords a safer route for ships than the more easterly Messier channel between the mainland and the Wellington Islands. Capt. Serrano had previously undertaken an excursion by boat up the river Palena, which passes through the principal range of the Cordilleras and enters the sea opposite the southern point of Chiloe Island. After fourteen days' travel, the journey was interrupted at the second mountain-chain by rapids, in which one of the boats was lost. He describes the valley of the river as very rich and fertile.

Australasia.—Fears are entertained for the safety of the Australian expedition sent to New Guinea by the Geographical Society of Australia, the scientific part of whose mission was under the care of Dr. Haacke. Violent monsoons made the shallows at the mouth of the Aird so dangerous that the party betook themselves to the Fly river, designing to ascend its first northern tributary and explore the supposed mountain and table-land of the interior. Cases of the murder of white traders have become more frequent in that region, and hence the anxiety caused by the want of recent intelligence.

The papers of Prince Roland Bonaparte on the part taken by the Netherlanders in the exploration of New Guinea have been published in a volume, with accompanying maps. These exploring expeditions were no doubt undertaken to forestall any attempt at colonization and annexation by Australia of the regions claimed by the Dutch.

By the agreement between England and the German Empire, England gives up the eastern coast of New Guinea as far as Huon gulf on the north, and the islands Long and Rook; while the groups of islands lying opposite the southeastern point of New Guinea, comprising the D'Entrecasteaux Islands, Woodlark, Laughlan, and the Louisiade Archipelago, are to be henceforth in the possession of England.

Mr. Verbeck, who was sent by the Dutch East Indian Government to investigate the causes and effects of the eruption of Mount Krakatoa, in May, 1883, has finished and published his report. Although earthquakes were felt at the same time in Australia, and it is found that a seismic movement of the sea-bottom in the whole region of the Moluccas occurred simultaneously, yet the disturbance, according to the results of the inquiry, was volcanic and not seismic. The theory is that large quantities of water, probably from the ocean, were suddenly brought into contact with incandescent matter in the neighborhood of the old volcano. According to Mr. Verbeck's calculations, at least eighteen cubic kilometres of matter must have been thrown out during the eruption; to give an idea of this vast mass, "Nature" says: "Imagine a box of ashes as large as Hyde Park and as high as the dome of St. Paul's; a hundred such boxes will give an idea of the mass of matter thrown out by Krakatoa in 1883." It is estimated that this mass of matter was thrown to a height of fifty kilometres, or nearly six times the height of Mount Everest. Some of the pumice thrown into the sea was carried as far as the east coast of Africa; some is now to be found in the Pacific between the Caroline and Marshall Islands; and Mr. Verbeck thinks it will reach the American coast at Panama early in 1886. The theory of Mr. Verbeck of course presupposes a central fire, and, according to it, the earth's crust must be much thinner than has been supposed, an inference justified by the vast extent of the disturbance caused by the eruption. The explosions were heard over an area amounting to one fourteenth of the earth's surface, while the air-wave set in motion by it traveled all around the globe and back to Krakatoa. It is held, also, that the great tidal-wave that followed was occasioned, not by earthquake-shocks, bnt by the projection into the sea of great masses of matter, including one side of the crater itself.

A New Volcano.—In October an immense volcano arose in the Pacific Ocean, latitude 20° 21′ south, longitude 175° 28′ west, fourteen miles from the island of Tonga. Mr. H. Shipley, United States consul at Auckland, New Zealand, writing to the State Department, says: "At daylight on Oct. 13 we observed dense volumes of steam, smoke, and clouds ascending. We sailed sufficiently near to see that it was a submarine volcanic eruption. Considering it not prudent to approach any nearer that night, we lay-to until morning. We then approached to about the distance of two miles. Eruptions take place every one or two minutes, changing its appearance every second, like a dissolving view. It was one of the most awfully grand sights I ever witnessed on the high seas. As to the size of the island thrown up, I am unable to state correctly, there being so much steam and clouds hanging over it, but I judge it is at least two or three miles long and sixty feet high."

GEOLOGICAL SURVEY OF THE UNITED STATES. Geology and Exploration.—Prior to the civil war, the investigation by the United States Government of the geology of its domain was either incidental or desultory. Geologists were attached to many important exploring parties, military, naval, and civil, and in a few instances special investigations were instituted for the purpose of determining the mineral resources of tracts of public land.

One of the most important pieces of incidental geologic work was that connected with the exploration of the transcontinental railway routes. In the years 1853–'56 five lines of geologic reconnaissance were thus carried across the country, and these were supplemented by numerous more local examinations. A similar work was performed in connection with the Mexican Boundary Survey (1849–1855). The surgeon of Capt. R. B. Marcy's expedition to explore the Red river of "Louisiana" (1852) was also a geologist. A geologist accompanied Lieut. G. K. Warren in his exploration of the Dakota country (1855–'57), and the same geologist accompanied the succeeding expeditions under Capt. W. F. Raynolds (1859–'60). Capt. John Pope's search for artesian water on the Llano Estacado (1855), Lieut. J. C. Ives's exploration of the Colorado river (1857–'58), Capt. J. H. Simpson's expedition in search of a wagon-route through Utah and Nevada on the line of the 39th parallel (1859), and Capt. J. N. Macomb's exploration of the San Juan country (1859), were all made to contribute information as to the geologic structure. In 1849 the naval expedition under Com. Wilkes touched the Pacific coast and gave its geologist an opportunity to explore portions of Washington Territory and Oregon; and still earlier, in the years 1845 and 1846, two land-surveyors, W. A. Burt and Bela Hubbard, acting under instructions from the General Land-Office, gathered information in regard to the rocks of the country traversed by the township lines of linear surveys in Michigan.

In 1834 G. W. Featherstonehaugh made an examination of the elevated country between the Missouri and Red rivers, and in the following year he traversed what was known as Wisconsin Territory. His instructions came from Congress through the War Department, and his reports were addressed to an officer of the army, but his work appears not to have been subsidiary to any military purpose. In 1839 David Dale Owen was sent by the General Land-Office to make a geologic examination of the States of Iowa, Wisconsin, and

Illinois, and his work was resumed in 1847 and continued for four years in Wisconsin, Iowa, and Minnesota. In 1847 and 1848 C. T. Jackson made a survey of the mineral lands of the United States in Michigan, and J. W. Foster and J. D. Whitney, who at first assisted him, afterward continued the work independently in the Lake Superior district in 1848–'49. The majority of these various studies were of the nature of reconnaissances, and did not afford the material necessary for the construction of geologic maps.

The war diverted the energies of the nation from geology, as from other scientific pursuits; but the subject was not forgotten, and when the return of peace permitted the resumption of investigation it was entered upon with new energy and in a more methodic manner. The reconnaissance work in connection with exploration was continued, but there were also instituted a number of surveys with more definite aims and more permanent organizations. The more important military expeditions accompanied by geologists were those of Capt. W. A. Jones in Wyoming (1873), Lieut. E. H. Ruffner in Colorado (1873), and Capt. William Ludlow in Wyoming (1875). The Commissioner of Indian Affairs sent two geologists to the Black Hills of Dakota (1876) to ascertain whether the formations of the country were such as to warrant its purchase from the Indians for mining purposes. At various times also the United States Coast Survey included investigations of the geologic features of the Atlantic and Pacific coasts.

The Four Antecedent Surveys.—The more permanent organizations were four in number, directed by Hayden, King, Powell, and Wheeler. As these were the immediate antecedents of the present organization, the character of each will be defined.

In 1867 Congress provided for the geologic survey of Nebraska, and Dr. F. V. Hayden, who had already traversed the Great Plains with the expeditions of Warren and Raynolds, was directed by the Commissioner of the General Land-Office to perform the work. A similar provision was made the following year, and in 1869 the organization was continued with a change of title, being called the Geological Survey of the Territories of the United States. From 1869 to 1872, inclusive, a series of geologic explorations were made in Dakota, Montana, Wyoming, Utah, and Colorado, the scope of investigation including, besides geology, the natural history, climatology, resources, and ethnology of the region. In 1873 geography was added, not as a primary object, but for the sake of furnishing a topographic base on which the distribution of the geologic formations could be shown. The name of the organization was at the same time changed, and it was thereafter called the Geological and Geographical Survey of the Territories.

In the year 1867 a survey of somewhat similar character was instituted in the War Department, the supervision of the work resting with the Chief of Engineers, and its immediate direction with Mr. Clarence King, a civilian geologist and mining engineer already familiar with a considerable portion of the Pacific coast. The organization was called the Geological Exploration of the Fortieth Parallel, and its work was restricted to a belt of country including the line of the first-built transcontinental railroad, and extending from the Rocky mountains to the Sierra Nevada. Within this belt it investigated the geology, the mining industry, and the botany, and it made surveys and published maps suitable for the illustration of its reports. Its field-work was completed in 1873.

In 1868 Major J. W. Powell, likewise a civilian geologist, began an exploration of the upper Colorado river, making, in 1869, an adventurous voyage in small boats through the cañons of the river, and studying the geology and geography by the way. In 1871 he received from Congress a small grant of funds, and further and larger grants were made from time to time until there was developed an organization of some magnitude. Geologic, geographic, ethnologic, and botanic explorations were all embraced in its work. At first it was entitled the Survey of the Colorado River of the West, and its official supervision was placed with the Secretary of the Smithsonian Institution; afterward it was transferred to the Interior Department, and its title was modified, becoming finally the Geological and Geographical Survey of the Rocky Mountain Region.

George M. Wheeler, a lieutenant of the Corps of Military Engineers, was sent by his chief, in 1869, to make a geographical reconnaissance in central Nevada. Two years later he took the field with a larger force, including, besides surveyors, students of the natural sciences, and his organization now assumed the title, Explorations West of the 100th Meridian. From year to year money was granted by Congress for the continuance of his work, and a large corps was continuously employed. Unlike the others, this survey had for its primary object the making of geographic maps; but it gave a prominent place also to geology, and gathered valuable material in the departments of zoölogy and ethnology.

The survey under the direction of Mr. King closed its field-work, as before mentioned, in 1873, and there remained three organizations equipped and designed to accomplish essentially the same objects. Indeed, the ambitions of the three corps were nearly identical. Dr. Hayden understood by the phrase "Territories of the United States," which defined his field, the same great area that was defined by Major Powell as the "Rocky mountain region," and by Lieut. Wheeler as the country "west of the 100th meridian." The difficulties likely to arise from the duplication of work were partially obviated, in 1877, by the Secretary of the Interior, who redistributed the work of

Hayden and Powell, so that each should make geographic and geologic surveys in an independent district, the former assuming exclusive charge of all investigations in natural history, and the latter of investigations in ethnology. Unfortunately, this adjustment could not include the work of Lieut. Wheeler, since he belonged to another executive department, and reported to a different chief. The Engineer Bureau elaborated a plan for the preparation of an atlas of the entire district, each atlas sheet representing a rectangular area bounded by certain meridians and parallels; and the work of Lieut. Wheeler was planned with reference to those sheets. The Secretary of the Interior determined upon a similar plan for the division of the country into rectangular areas of somewhat different size, and bounded by different meridians and parallels, and he assigned certain of these areas to the organization under Dr. Hayden, and certain others to that under Major Powell. This duplication of plans, and the rivalries associated with it, were recognized by Congress as seriously prejudicial to a work which all desired to see carried forward. Various proposals were entertained from time to time to abolish all but one of the organizations, and give to that one exclusive possession of the field, and, though none of these prevailed, the corps were greatly embarrassed by the uncertainty of their tenure. Each was seriously tempted to make haste in publication, at the expense of thoroughness, so as to enable Congress and the public to appreciate that work was actually being performed by it; and each was restrained by similar considerations from the formation of far-sighted, economic plans for its future work. Congress, doubting its own ability to select from the three the one best qualified to conduct the entire work, finally appealed to the National Academy of Science, the official adviser of the Government in scientific matters. After giving full consideration to the subject, the Academy reported an elaborate plan for the unification of the work, and a considerable portion of this plan was eventually adopted. On the 3d of March, 1879, the existing organizations were abolished by law, and a new one was instituted under the title of the United States Geological Survey. This survey was made a bureau of the Interior Department, and the appointment of its chief, who received the title of Director, was vested in the President of the United States. Geologic investigation was thus, for the first time, clearly recognized as a function of the General Government, and the legislation in regard to it was made impersonal. On the 21st of March, Mr. Clarence King was named the first director by President Hayes. After two years of service he tendered his resignation, and the present director, Major J. W. Powell, was appointed by President Garfield.

The wording of the creative law left room for doubt whether the functions of the new survey applied to the entire country, or only to the lands belonging to the Government; and, as the initial appropriation of funds was small, the more restricted field was accepted for the survey. Three years later the wording of the law was so modified as to render the authority for a general work unmistakable, and operations were extended to the entire country. While this change was pending there was a free discussion, both in and out of Congress, of the proper functions of a geological survey, of the power of the General Government to execute such a work, and of the general principles that should regulate the governmental endowment of research. The principles that finally determined the action of Congress, and the subsequent action of the director of the survey, were the following: It is not advisable to render state aid to researches that can be conducted equally well by individuals, but the Government may properly and advantageously carry on scientific investigations that, by reason of their magnitude and expense, can not be prosecuted by individuals. As between the General Government and the individual States, it is wise to leave with the States the special geologic inquiries that are of local interest and importance, but the General Government should undertake those greater problems whose solution demands the combination of observations made in many States.

In determining the scope of the work to be performed, geology was made the prime object; paleontology and lithology were recognized as subordinate branches of geology. Biology and meteorology were excluded as subjects of investigation, although recognized as affiliated sciences, whose accepted principles must form the basis of many conclusions in paleontology and general geology. Geography was given a prominent place, because good maps are essential to thorough geologic study and the proper presentation of geologic facts.

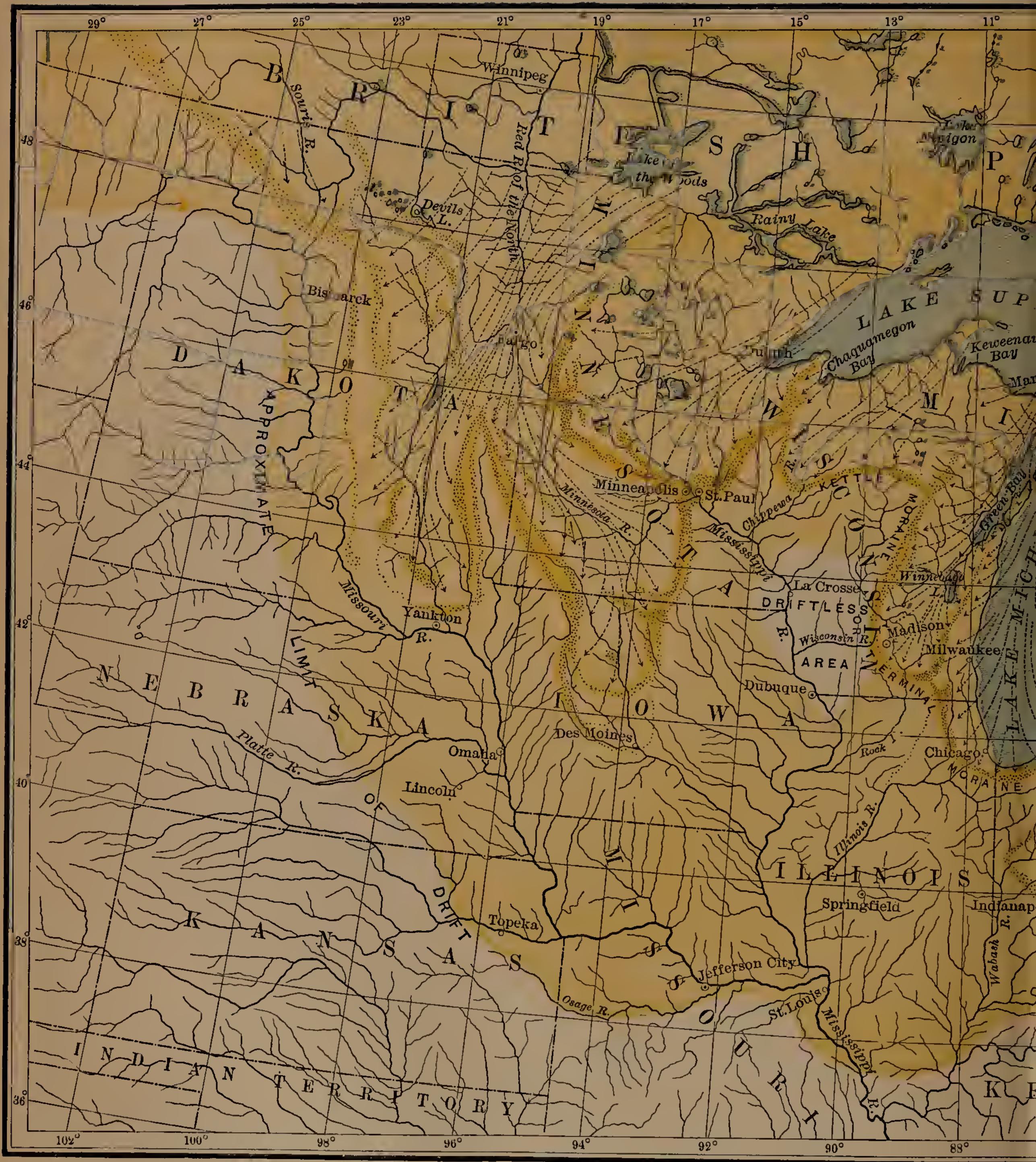
Internal Organization. — The survey having been given a satisfactory status, the problems of internal organization occupied the attention of its chiefs. One of these problems was the proper basis to employ in the subdivision of the work. For some reasons it appeared best to make the principal units of organization geographic areas, and for other reasons to classify by subjects of investigation. The former basis was adopted with slight exceptions. The field of operations was divided into a small number of districts, and a geologist was placed in charge of the work in each, supervising all that was done in stratigraphy, volcanism, paleontology, lithology, economic geology, and geography. It was soon found, however, that although the districts were exceedingly large, each of them was too small for the satisfactory conduct of the most important investigations instituted within it. The demands of the work led to a practical abandonment of the lines of demarkation. It was found also that the attention of the geologist in charge of each division was so distracted by the variety of work he was called upon to supervise that his personal studies were greatly hampered. The junior assistants, exempt from the cares of administration, were able to push their special investigations far in advance of the complementary work undertaken by their chiefs and senior colleagues. The talents and acquirements that rendered the work of an individual most desirable, led, by qualifying him to direct the work of others, to a great diminution in his personal accomplishment. The original subdivision of the work by geographic areas has therefore been in large part abandoned, and for it there has gradually been substituted a system in which the primary basis of subdivision is the nature of the work to be performed, and in which the body of the work placed under the direction of one assistant is not so large that his administrative duties make serious encroachments upon his time. At the present time the survey has the following organization:

In the department of general geology eight independent investigations are in progress. Each of these is in charge of a geologist, and, with a single exception, each geologist supervises the work of a corps of assistant geologists. Prof. T. C. Chamberlin is at the head of the division of glacial geology, having for his field all those States east of the Rocky mountains in which the vestiges of ancient glaciers are found (see map). Two divisions are organized for the investigation of the metamorphic crystalline schists. The first has its field in the eastern portion of the United States known as the Appalachian region, and is in charge of Prof. Raphael Pumpelly. To the second, under Prof. Roland D. Irving, is assigned the Lake Superior district. The division of volcanic geology and seismology is in charge of Capt. C. E. Dutton, and his principal field is in the States and Territories bordering the Pacific Ocean. Mr. Arnold Hague is conducting an investigation of the thermal springs of the Yellowstone region and of the general geology of the National Park. The general geology of the Appalachian region, with the exception of the areas of crystalline rocks, is in charge of Mr. G. K. Gilbert. Work on the geology of the region of the sources of the Mississippi is conducted by Dr. F. V. Hayden; and Mr. W. J. McGee is studying the geologic history of the vicinity of Washington City.

In the department of economic geology there are three independent corps. The first, under Mr. G. F. Becker, has its field on the Pacific coast, and is at present giving special attention to the quicksilver deposits. The second, under the direction of Mr. S. F. Emmons, has its field in the Rocky mountains, and is occupied with the study of deposits of gold, silver, and coal, and with the subject of artesian wells. The third, in charge of Mr. Albert Williams, Jr., collates annually the statistics of the production in the United States of the non-precious metals and other economic minerals.

Of the affiliated sciences whose results are tributary and essential to geologic investigation, paleontology receives most attention. The work is organized in five divisions, the basis of organization being primarily biologic. All the work on fossil vertebrates is in charge of Prof. O. C. Marsh, and all on fossil plants in charge of Mr. Lester F. Ward. The study of invertebrate fossils is subdivided on the basis of geologic chronology. Shells of Paleozoic age are assigned to Mr. C. D. Walcott, those of the Mesozoic and Cenozoic to Dr. C. A. White, and those of the Quaternary to Mr. William H. Dall. The subject of lithology engages the attention of a considerable number of specialists, but these are not segregated in a corps. They are attached to various divisions of general and economic geology. Similarly, there are chemists attached to the Pacific and Rocky mountain divisions of economic geology; but there is also an independent division of chemistry, and this is in charge of Prof. F. W. Clarke. A large share of its work consists in the execution of analyses of rocks, minerals, and mineral waters for the various divisions of general geology, but it is also conducting independently several investigations in mineralogy and physics. The physical experiments are arranged with reference to certain questions in dynamic geology whose settlement is demanded by the great problem of the condition of the earth's interior.

A large portion of the work in general and economic geology can neither attain the best results nor clearly set them forth in publication without the aid of good topographic maps; and as only a small portion of the United States has heretofore been accurately delineated, the Geological Survey has been forced to undertake the preparation of maps. So great is the advantage to the geologist of beginning his field-work with a good map in his hands, that it has been thought best to strengthen the geographic work as much as possible in the first years of the survey; and the geographic corps is at present the largest single division of the organization. It is in the charge of Mr. Henry Gannett, and embraces a large number of subdivisions, to each of which is assigned the survey of an area. In making these surveys, the relative positions of districts widely separated are determined by astronomic observation; the relations of a limited number of points within each district are established by triangulation; and topographic details, such as the positions of ridges, hills, streams, towns, and roads, are determined partly by the use of the plane-table and partly by traverse surveys. The delineation of reliefs is by means of contours representing lines of equal elevation; and the altitudes necessary for the drawing of these contours are based on leveling, local differences of altitude being determined partly by barometric methods and partly by the measurement of vertical angles. Great use is made of leveling data obtained from railway



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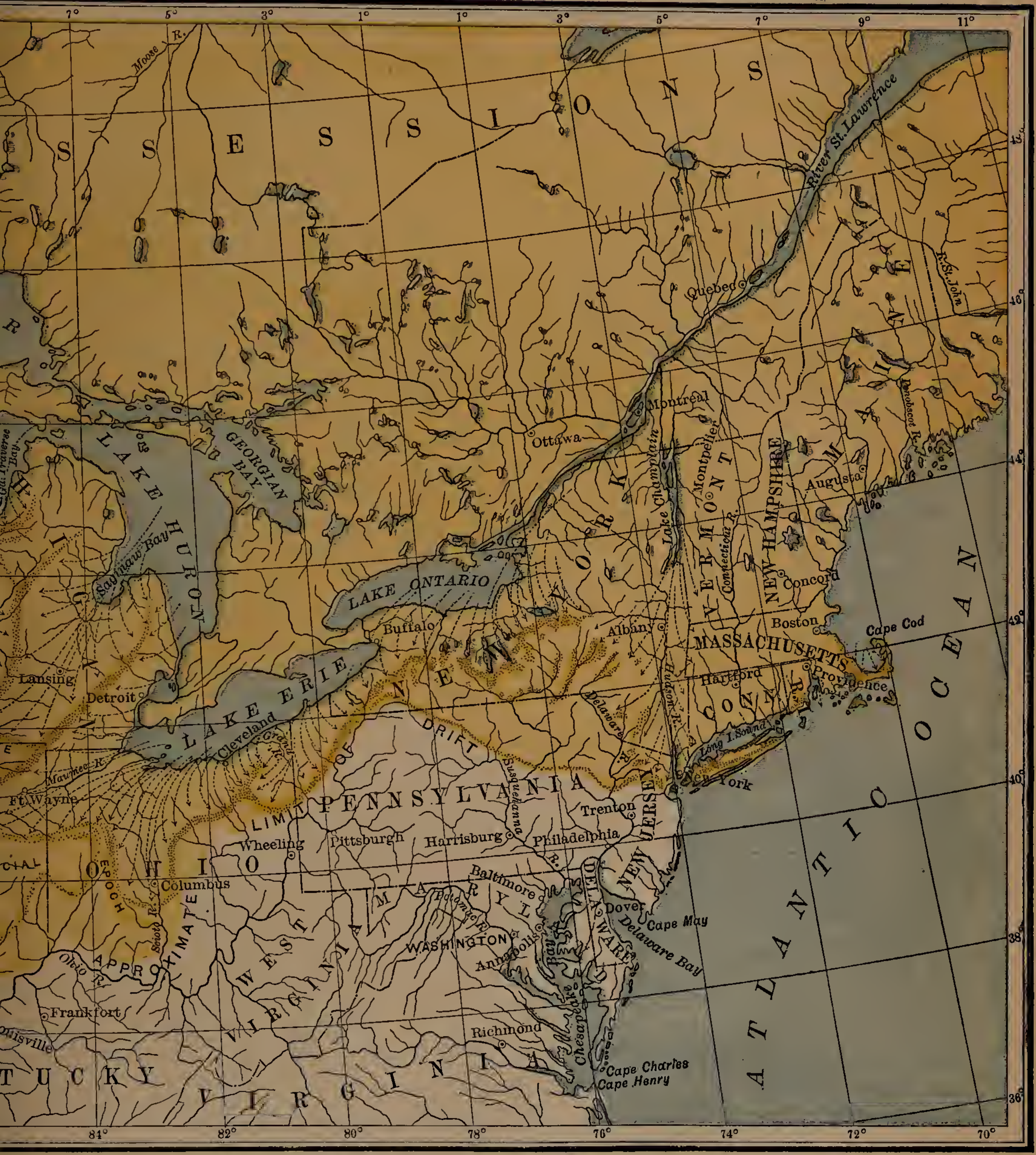


TERMINAL MORAINE

LACIAL EPOCH.

THE U.S. GEOLOGICAL SURVEY.)

Moraine

Glacial Movements
(Generalized)

and other private surveys, and critically compiled.

Besides the scientific corps outlined above, the organization includes a number of accessory divisions, which are grouped at the central office. The technical library, comprising 15,000 volumes and 11,000 pamphlets, is in charge of a librarian, with a corps of assistants. There is a division of disbursements and accounts, which has charge of all purchases and other expenditures of money. The work of publication gives rise to two divisions, one of which is devoted to the preparation of illustrations, while the other assists the authors of reports in the work of editing. There is a division of photography, with multifarious functions. It aids the topographer by enlarging and reducing maps to be united in compilation; it aids the field-geologist by performing the indoor work complementary to his outdoor photography—a method of illustration now rapidly growing in importance; it aids the paleontologist in the delineation of plants and other fossils; and in numerous ways it economizes the time of the draughtsman and engraver.

The principal office of the Survey is in the city of Washington, and the greater part of the indoor work is performed there; but branch offices are maintained in Denver and San Francisco by the economic divisions of the Rocky Mountains and the Pacific. The collections are deposited in the National Museum, and in the same building are located the laboratories of chemistry, physics, paleobotany, and invertebrate paleontology. The laboratory of vertebrate paleontology, with its bulky collections, can not at present be afforded the necessary space in Washington, and by the courtesy of Yale College is temporarily accommodated in New Haven.

Appropriations.—So elaborate a system of co-operative work could not be well organized in a brief period, and therefore Congress made provision at first for a relatively small force only. The money appropriated for the fiscal year ending June 30, 1880, was $106,000; for the fiscal year 1881, $156,000; for 1882, $156,000; for 1883, $258,440; for 1884, $341,140; for 1885, $489,040; for 1886, $503,240. A part of each year's appropriation is devoted to the payment of certain permanent salaries established by law; the remainder is employed in the payment of temporary employés, in defraying traveling expenses, and in the purchase of material necessary to the work in offices and laboratories. Independent provision is made for engraving and printing, which are paid for from the general appropriation for the work of the public printer. It is estimated that the amount thus expended during the current fiscal year will exceed $200,000.

Publications.—The Survey publishes annual reports, monographs, bulletins, statistical papers, and maps. The annual reports contain, first, the administrative reports of the director and his principal assistants; and, second, scientific papers, exhibiting those results of the work which have the greatest general interest. The monographs are in quarto, and embody *in extenso* the final results of the more important researches. The bulletins are in octavo, and are intended to give prompt publication to comparatively brief essays on special subjects. The statistical papers are devoted to the mineral resources of the country. Some of the monographs are illustrated by atlases, containing local and special maps; but there is also to be issued a series of maps prepared on a uniform plan, so that, when complete, it will form an atlas of the entire country. The unit of this series is an area measuring one degree in latitude by one degree in longitude, and the scale adopted for the unit map or atlas-sheet is 1 : 250,000, or, approximately, four miles to the inch. This gives to the engraving a length, north and south, of seventeen inches, and a width, east and west, of about fourteen inches. For regions where, by reason of dense population or geologic complexity, this scale is inadequate, use is made of one twice as great, or 1 : 125,000; and, in such case, four sheets instead of one are employed to represent the unit area. For certain regions a still larger scale has been adopted, namely, 1 : 62,500, with sixteen sheets to the square degree. The engraving is upon copper, and each sheet is printed in three colors. The drainage, including streams, ponds, lakes, etc., is printed in blue. The contours, or grade-curves representing lines of equal altitude, are printed in brown. The lettering, the towns, the railroads, the wagon-roads—or, in general, the "culture"—are printed in black. The vertical interspace between contiguous contours varies with the scale and with the character of the country to be represented, the range being from 20 feet to 200 feet.

It is provided by law that the publications of the Survey shall be either sold at cost, or else exchanged for other books and maps; and the publications received in exchange are added to the library of the Survey. Three thousand copies of each publication are placed in the hands of the director for such disposal, and 1,900 copies are issued to the officers of the legislative and executive departments of the Government, and to certain libraries, etc., throughout the United States. Special provision has also been made for the gratuitous distribution of large editions of specified annual reports. Up to the present time there have been issued four annual reports, seven monographs, twenty-six bulletins, and two statistical papers. The fifth and sixth annual reports are in press, as are also four monographs and four bulletins. Forty-six atlas-sheets are in the hands of the engraver, and twenty others are complete in manuscript. This literary output, which makes a total of less than 11,000 pages, can not be regarded as large, if we take account of the size of the corps and its liberal endowment, and if we make comparison with the work of the organizations that preceded it, or with that of the various State geological surveys. Its moderate amount is to be ascribed partly to the fact that the early years of a survey necessarily witness the inception of numerous researches and the completion of comparatively few; but chiefly to the policy adopted by the director of affording publication only to material that has been so thoroughly assorted and elaborated that its orderly presentation is economic of the time and patience of the reader. It is believed that the double advantage of enhanced quality and restricted quantity outweighs the disadvantage of delay.

Relations to State Surveys.—Although geologic surveys have existed in most civilized countries for many years, our own can not be said to have been modeled after any other. Its organization has been developed under the influence of American institutions and American needs, and has a peculiar and distinctive character. This is well illustrated by comparing it with the geologic survey of Great Britain. In that country an elaborate survey for the making of detailed topographic maps was instituted many years ago, before geology had fairly taken her place among the sciences; and when the mapping of the geologic formations was afterward undertaken by the Government, the geologic corps, being already furnished with topographic maps, had no need of a geographic division. The task to which it applied itself was the tracing of the outcrops of the various formations across the surface of the country, and their accurate delineation upon maps furnished by the Ordnance Survey. Along with the tracing there is carried minute observation of the nature of the formations and of their dips and strikes, and thus has been accumulated the basis for the broadest generalizations. But these generalizations the official organization refrains for the most part from drawing, leaving that work to private geologists, or to official geologists in their private capacity. While it may fairly be said that England has contributed more than any other country to the philosophy of the science, her governmental publications are almost restricted to its dry facts. In the United States, the lack of good maps, while it has led the geologic organization to undertake the making of them, has at the same time prevented it from devoting its energies to the elaborate tracing of outcrops, and induced it to undertake the discussion of broader problems involving theoretic considerations of the highest order. A similar tendency arises from the relations of the States to the General Government. In Great Britain there are no institutions like our State surveys, and the Government assumes the investigation of local geology. In this country important work has been done by many individual States, and in several instances the geographic distribution of the formations has been determined as accurately as existing maps permitted. Inasmuch as such work is of prime importance to all economic interests based on mineral resources, and as such economic interests are local, it is believed that it can be conducted most advantageously by State surveys. An ideal system would distribute governmental investigation in a manner strictly parallel to the distribution of governmental control. An organization in each State would assume the study of all local details, and of all economic matters of purely local importance, and the general organization would take cognizance only of general questions involving larger areas than States.

While the poverty of some States, the indifference of others, and the existence of large areas without State organization will prevent the full realization of such a system, there is a distinct tendency in that direction. A mutual adjustment has been effected between the work of the general survey and that of several State surveys so as to avoid duplication, and in most cases the partition of work has been accompanied by an arrangement for co-operation. In Massachusetts there is co-operation in topographic work, the United States Geological Survey undertaking to map the entire State on the maximum scale of 1 : 62,500, or one mile to the inch, on condition that the State defrays one half of the expense; and in New Jersey a somewhat similar arrangement has been made.

Investigation of the Drift.—To illustrate the distinctively general nature of the national survey, a brief outline will be given of its investigation of the drift. Throughout a great portion of the northern United States the surface is largely constituted of loose materials, collectively known as "the drift." This formation differs in essential particulars from the residuary and alluvial deposits that constitute the greater part of the incoherent *débris* distributed over the surface of the land. As rocks are disintegrated and partially dissolved by rain and other atmospheric agencies, the clay, sand, and blocks that remain are called residuary. A portion of this residuary material is washed into streams, and by them is transported to valleys, where it is redeposited, and it is then called alluvium. The blocks belonging to a residuary deposit are either angular or else exhibit on their surfaces incipient decay. The blocks or bowlders of the drift are all abraded and more or less rounded, and are usually homogeneous. Residuary clays, having been produced by leaching, contain no soluble minerals; the clays of the drift ordinarily abound in the carbonates of lime and magnesia. Alluvium is more or less assorted, fine and coarse matter being deposited at different places, or, if at the same place, at different times and in separate strata; much of the drift is unassorted, beds of the finest clay containing not only pebbles but bowlders of great size. Residuary deposits lie on the rocks from which they are derived. Alluvium lies at lower levels than the parent rock, and its source is to be found by tracing backward lines of drainage. The materials of the drift occur at various and often great distances from the outcrops of the parent beds, and their lines of transportation, which often ascend, have no established relation to lines of drainage. The major part of the drift has been transferred from the north southward, and some of it has been carried from one side to the other of the basin of the Great Lakes. Another peculiarity of the drift is found in the configuration of its surface. Over some broad areas the surface is gently undulatory, or even plain, but there are other regions where it is exceedingly irregular, comprising short, uneven ridges, and steep-sided, roundish hills, so disposed as to include cup-shaped depressions known as kettle-holes. Many of these depressions contain ponds, and these conspire with an irregular arrangement of the streams to give the hydrography a peculiar and striking character. The drift-covered area is further characterized by a distinctive grooving, scratching, and polishing of its bed-rock, and the trend of the scratches corresponds in a general way with the direction of transportation of the drift.

For a long time these phenomena remained without explanation; but it was finally pointed out by Louis Agassiz that the bed of a glacier is grooved and polished after the manner of our drift area, and that the *débris* discharged by a glacier at its end or deposited from its lower surface has many of the characters of the drift. In the year 1850 he broached the theory that a great glacier, or sheet of ice, thousands of miles in extent, had invaded the country from the north, plowing up and grinding the face of the country, and spreading its *débris* in the form of moraines. His view was widely adopted, but there were some who thought that a better explanation might be found by assuming that glaciers were always confined to the more northerly regions, and that icebergs derived from them not only transported the drift but polished the rock-surfaces, then submerged, by stranding as they floated southward. So wide-spread and varied are the phenomena that the opinion of each individual observer depended very largely on his locality; and the two rival explanations, known as the "glacier theory" and the "iceberg theory," were argued and discussed for more than thirty years, without a satisfactory conclusion. The advocates of the glacier theory maintained and increased their numerical preponderance, but as late as 1882 Prof. J. D. Whitney wrote in opposition to all their more important conclusions, and in 1883 Dr. J. W. Dawson, in his presidential address to the American Association for the Advancement of Science, reiterated his opinion that "the theory of a continental glacier must be given up." During the period of this protracted discussion investigation was not idle; every year saw important additions to the knowledge and literature of the subject; but the system of State surveys gave to no individual or corps the opportunity for that continuous examination of the whole field which was necessary for the establishment of a satisfactory general theory. When the work of the national survey was extended to the eastern portion of the United States, the first geologic work instituted was the comprehensive investigation of the drift. With the aid of one or two permanent assistants Prof. Chamberlin undertook to collate the abundant literature of the subject, and, by revisiting numerous localities that had been the subject of description, to interpret and utilize a body of apparently inharmonious observations. He has traced certain special phenomena and groups of phenomena through the whole breadth of the Northern States, and he has organized into a system the local work of numerous observers heretofore independent. By this organization he has availed himself of the local information in the possession of the individual, and has directed attention to specific questions whose answers contribute to the solution of certain definite problems which his comprehensive view has enabled him to formulate. The investigation is by no means complete, and indeed some of the broader questions involved can not be fully answered by the phenomena within the boundaries of the United States; but important progress has been made. As the conclusions to which he has attained are based not only on the work recently performed under his direction, but on the antecedent observations and discussions of himself and others, it is impossible, in a brief statement of results, fully to discriminate those which depend solely upon the new organization. The following paragraphs attempt merely to summarize the present condition of the subject, or rather of those parts of it to which the corps has given most attention.

It is convenient to distinguish drift that has a very irregular surface, characterized by knobs and kettle-holes, from that with a more even surface, and we will make use of the terms *knob-and-basin drift* and *undulating drift*. The undulating drift has the greater area. The knob-and-basin drift is arranged in belts or lines, and these lines are measurably independent of the configuration of the country they traverse, ascending and descending its slopes. When they are traced out and mapped, it becomes evident that they constitute a system of loops, the convexities of which are turned southward. Within each of these loops there is a peculiar fan-like arrangement of the glacial striæ. Along the center or axis of the loop they are parallel to its general direction, but on either side they curve away from the axis, and in immediate juxtaposition to the limiting line they are nearly or quite normal to that line. Moreover, if each loop and its associated striæ are taken as a unit, it is found that each such unit is associated with a lake-basin or other topographic depression lying northward, or, more exactly, lying in the direction toward the source of the glacial motion as indicated by the striæ. These phenomena suffice to demonstrate that the belts of knob-and-basin drift are terminal moraines. At a certain epoch the southern margin of the great northern ice-sheet was divided by the inequalities of the land surface into great fingers or loops, and within each loop the ice gradually spread to the right and left from a central line of greatest motion. A large portion of the *detritus* torn and ground from the rock-floor by the glacier was deposited at the margins of the lobes, and the irregular manner in which it dropped from the melting ice gave to the marginal moraines their peculiar tumultuous topography. The moraines have not yet been accurately determined in all parts, but, as shown on the map, enough has been ascertained to prove that they traverse the country from Cape Cod to the valley of the Missouri, and then pass from Dakota northwestward into British America. Their range in the United States is about two thousand miles, but the sinuosity of their course gives them a length of not less than three thousand miles, and they traverse thirteen States, and the Territory of Dakota.

As may be seen by the map, a large area of undulating drift lies south of the great moraine belt, and a still larger area north of it. While there is a general similarity between the superficial features of these two areas, there is also a contrast, and this contrast is indicative of age. It is readily understood that the ordinary processes of change on the surface of the land tend to obliterate lakes. The streams that flow into them bring at every flood a tribute of mud and other *débris*, which falls to the bottom and gradually fills their basins. The streams that flow out of them constantly tend, by eroding their channels, to lower the surfaces of the lakes and eventually drain them. A lake is thus an evanescent feature, whose ultimate destruction is merely a question of time. When, therefore, it is observed that the surface of the undulating drift at the north abounds in lakes and ponds, while the corresponding surface at the south is almost perfectly drained by streams, it becomes evident that the northern drift received its undulating configuration at a later date than the southern. It is thus known that a considerable time elapsed between the deposition of the southern drift and the epoch of the northern drift. The time represented by the southern drift is called the first glacial epoch. The second glacial epoch is represented by the moraine and all drift deposits lying north of it. It is a remarkable fact that the undulating drift represented by the earlier epoch is not furnished at its outer margin with a terminal moraine, and this fact leaves a residuum of doubt in regard to its mode of deposition. While the inapplicability of the iceberg theory to the knob-and-basin drift of the district of the Great Lakes has been fully established, the theory can not yet be set aside as a possible explanation of the phenomena of the undulating drift of the more southerly district. It has, moreover, an assured though subsidiary place in accounting for certain deposits which overlie the glacial drift in some parts of the Laurentian lake-basin. During the retreat of the ice-sheet from that basin it happened at many points that temporary lakes were held between the ice front and the uplands at the south, and in some of these lakes floated icebergs.

In various other ways the simplicity of the phenomena is interrupted, and it is already evident that the Quaternary history of the continent is highly complex. The southern drift in many places consists of two layers, between which is interpolated a bed of vegetable *débris*, and the plants that constitute this layer indicate that the glacial climate was interrupted by one comparatively mild. The great moraine is not simple, but in many places divides into two or three lines, or even more, showing that, after the ice had reached its greatest extent and begun to retreat, it hesitated more than once, and may even have re-advanced. All the phenomena were influenced by changes that took place in the altitude of the land. During the earlier ice epoch the region of the Missouri river appears to have been more depressed than during the later. For an unknown period, terminating after the close of the later epoch, there was a great and general depression at the north.

GEORGIA. State Government.—The following were the State officers during the year: Governor, Henry D. McDaniel, Democrat; Secretary of State, N. C. Barnett; Treasurer, R. V. Hardeman; Comptroller, William A. Wright; Attorney-General, Clifford Anderson; State School Commissioner, G. J. Orr. Judiciary, Supreme Court: Chief-Justice, James Jackson; Associate Justices, Martin J. Crawford and Alexander M. Speer.

Legislative Session.—The Legislature met on the second Wednesday of July, and adjourned in the latter part of October. The following are the more important acts of the session:

Appropriating $25,000 to place in proper condition the buildings of the University of Georgia.

To authorize the payment of interest on certain indorsed bonds of the Macon and Brunswick Railroad.

Levying a special tax for the completion of the new Capitol.

Requiring tax-payers to make return under oath of their property in detail.

Changing the time of meeting of the Supreme Court from the second Monday of February and the first Monday of September to the first Monday of March and October respectively.

To authorize and empower the Board of Education, or other proper authorities, in certain counties and municipal corporations, in their discretion, to annex to the public schools a department of Industrial Education.

Amending the law relating to the organization and government of the militia.

To provide for a complete roster of Georgia troops in the Confederate army.

To encourage good behavior and diligence of persons convicted of misdemeanor who are serving their time on chain-gangs.

To amend the garnishment laws of the State by providing in what way garnishments may be dissolved.

To define the duties of masters in chancery and Auditors, and of the judges of the Superior Court upon exceptions to their reports.

To define where corporations, mining or joint-stock companies may be sued and served.

Defining voluntary assignments, and providing that a sworn schedule of creditors shall be filed with the deed of assignment, and also providing that fraud shall avoid the assignment.

To authorize the Governor to issue bonds of the State to the amount of $3,455,135, and negotiate the same for the purpose of raising money to pay that portion of the public debt which falls due in 1885 and 1886, and to provide for the exchange of new bonds of the State for the bonded indebtedness now outstanding and falling due in those years, such bonds to have thirty years to run and bear not exceeding 5 per cent. interest.

To require railroad companies, when passenger-trains are more than half an hour behind the schedule-time, to keep posted at every telegraph-station along their line the time such train is behind its regular time.

To regulate the registration of deeds and bills of sale given as security for debt, requiring that they shall be recorded within thirty days from their date.

To declare and establish the grade of turnpikes in the State.

To encourage search for phosphate rock and phosphate deposits by granting to those who find it the right to dig, mine, and remove the same in and from the beds and margins of the navigable streams and waters of the State; gives exclusive license for ten years upon certain payments.

To prevent the importation and sale of second-hand or cast-off clothing.

Regulating assessment life-insurance.

The law relating to sales of certain products was amended, so that now it is provided that "cotton, corn, rice, crude turpentine, spirits turpentine, rosin, pitch, tar, or other products sold by planters and commission merchants on cash sale, shall not be considered as the property of the buyer, or the ownership given up, until the same shall be fully paid for, although it may have been delivered into the possession of the buyer: *Provided*, That in cases where the whole or any part of the property has been delivered into the possession of the buyer, the right of the seller to collect the purchase-money shall not be affected by its subsequent loss or destruction."

An act to establish a technological school as a branch of the State University provides that it shall be located in such eligible place as offers the best inducements, and that its course shall be modeled upon that of the Institute of Industrial Science at Worcester, Mass. The sum of $65,000 is appropriated for its establishment.

Another act provides "that in all cases in this State, where landlords shall rent lands to tenants, and it is agreed that the tenant shall pay the landlord a part of the crop or crops produced on the lands so rented for the use of the same, and the tenant shall in good faith turn over and deliver to his landlord, in discharge of said rent, the part of the crop or crops agreed on as aforesaid, said articles so turned over and delivered shall be discharged from the lien of any judgment, decree, or other process whatsoever against said tenant."

An act was passed providing that no judgment hereafter obtained in the courts of the State shall be enforced after the expiration of seven years from its rendition, when no execution has been issued upon it, nor, when execution has been issued, after seven years from record of the last action under it.

Perhaps the most important act of the session was a general local-option law. This law provides "that upon application by petition, signed by one tenth of the voters who are qualified to vote for members of the General Assembly, in any county in this State, the ordinary shall order an election to be held at the places of holding elections for members of the General Assembly, to take place within forty days after the reception of such petition, to determine whether or not such spirituous liquors as are mentioned in the sixth section of this act shall be sold within the limits of such designated places: *Provided*, That no election held under this act shall be held in any month in which general elections are held, so that such elections as are held under this act shall be separate and distinct from any other election whatever." The sixth section declares "that if a majority of the votes cast at any election, held as by this act provided, shall be 'against the sale,' it shall not be lawful for any person within the limits of such county to sell or barter for valuable consideration, either directly or indirectly, or give away to induce trade at any place of business, or furnish at other public places any alcoholic, spirituous, malt, or intoxicating liquors, or intoxicating bitters, or other drinks which, if drank to excess, will produce intoxication, under penalties hereinafter prescribed." It is, however, provided "that nothing in this act shall be so construed as to prevent the manufacture, sale, or use of domestic wines or cider, or the sale of wines for sacramental purposes: *Provided*, such wines or cider shall not be sold in bar-rooms by retail, nor shall anything herein contained prevent licensed druggists from selling or furnishing pure alcohol for medicinal, art, scientific, and mechanical purposes." If the vote is "against the sale," the act takes effect after four weeks' publication of the result. When the question has once been determined in a county, it can not again be put to a vote therein in less than two years thereafter, and then only upon petition as above provided.

Two amendments to the Constitution of the State were proposed, which are to be submitted to the people at the next general election. The first amendment proposes to strike out the following section: "All special or local bills shall originate in the House of Representatives. The Speaker of the House of Representatives shall, within five days from the organization of the General Assembly, appoint a committee, consisting of one from each congressional district, whose duty it shall be to consider and consolidate all special and local bills on the same subject, and report the same to the House; and no special bill shall be read or considered by the House until the same has been reported by the committee, unless by a two-third vote; and no bill shall be considered or reported to the House by said committee unless the same shall have been laid before it within fifteen days after the organization of the General Assembly except by a two-third vote."

The second proposition amends the last sentence of Article VII, section 1, paragraph 1, by adding thereto at the end of said sentence the following words, "and to make suitable provision for such Confederate soldiers as may have been permanently injured in such service," so that said sentence when so amended shall read as follows: "To supply the soldiers, who lost a limb or limbs in the military service of the Confederate States, with suitable artificial limbs during life, and to make suitable provision for such Confederate soldiers as may have been permanently injured in such service."

Local Option.—The first election under the general local-option law occurred in Fulton County, which contains the city of Atlanta, on Nov. 25, and resulted in a majority of 225 for prohibition, in a total vote of about 7,000. The campaign that preceded the vote was remarkable for its activity and for the breaking down of party and color lines. Democrats and

Republicans, whites and blacks, occupied the same platform in advocacy or denunciation of prohibition. On Nov. 30, United States District Judge McCoy issued a temporary injunction restraining the ordinary from declaring the result of the election. The proceeding was instituted by a non-resident of the State, interested in the liquor business in Atlanta. It was claimed that the local-option act was unconstitutional. On Dec. 17 the judge, after hearing argument, dissolved the injunction, overruling the objections alleged against the act. Other injunctions were obtained, but had not been disposed of at the close of the year. The history of the movement has been given as follows: "From time immemorial it has been the custom of the Georgia Legislature to forbid the sale of liquor within so many miles of churches and school-houses in rural communities. The temperance people took advantage of this custom. As they were interested in churches and schools, they took care that new institutions were judiciously located, so as to make prohibition territory as contiguous as possible. Then a step further was taken. Johnson County, far removed from railroads and civilization, asked that her citizens be permitted to vote upon the exclusion of liquor. The request was granted, and so remote was the county that when it 'went dry,' in the popular parlance, the outside world never heard of it. Then militia districts, here and there, asked for the privilege of local option, and occasionally another backwoods county would come in.

"The first sign of discontent came from the wholesale liquor-dealers. When they announced, in 1883, that total prohibition prevailed over two thirds of the territory of Georgia, and that in consequence their year's business had fallen off 50 per cent. from that of the previous year, they were scarcely believed. Yet so it was. The entire northern portion of the State, a large slice of the southwestern, and all of the southeastern, were as absolutely prohibition territory as if they were portions of Maine. In Alabama and South Carolina the same tactics were being pursued. The movement had also extended into Mississippi, where it was already looked upon as a disturbing element in politics.

"Then the Prohibitionists laid siege to the smaller towns, until at last, out of the 137 counties in Georgia, 85 were totally committed to prohibition, 30 others were partially under prohibition, and in only 22 counties was the sale of liquor unrestrained. Thus victorious and emboldened, and recruited by the entire Republican vote of the State, the temperance leaders demanded that the Legislature should pass a general local-option bill—a bill that would permit an election to be held in any county upon the subject, on the petition of a given number of citizens, and without the expense and annoyance of special appeals to the Legislature in each case. This measure was deferred in the session of 1884, but was on the calendar for the summer session of 1885. Just before the meeting of that session the temperance people held a State Convention for the purpose of moral effect upon the Legislature. There was presented upon the stage a scene never before witnessed in a Southern city—the most hated of Republicans and the most ultra of Democrats shook hands in common cause. White people did not refuse to sit upon a stage where colored men were invited guests. The contest over the bill in the Legislature was long and bitter, but finally local option won the day. This opened the way for an attack upon the large cities, and Atlanta was chosen as the battle-ground. A petition signed by 2,800 registered voters requested that an election be ordered."

Another authority, writing just prior to the Atlanta election, says: "For ten years temperance agitation has been carried on in Georgia, which has so far succeeded that now, out of 137 counties of the State, the sale of liquor is only allowed in fifteen. These fifteen counties are the seats of large cities, where the liquor element has large property interests at stake. The principle by which the agitation was carried on is known as that of local option. It has been broached in each community as a moral and police measure, thus meeting support of both political parties, both colors, and the entire moral element of society. No serious opposition was met till the movement reached the great cities, where large property interests were at stake. These local-option elections were held under special acts of the Legislature. The business interest of the large cities was always strong enough to prevent the passage of such local-option act so far as they were themselves concerned. Hence the Legislature passed a general local-option bill."

It has been said that a controlling force in this movement has been the conviction on the part of employers that the removal of temptation from the colored people would increase their efficiency as laborers.

Educational Institutions.—A Southern journal, advocating institutions for higher education, refers thus to Georgia: "She has her university, established ninety-seven years ago, lately largely assisted by the noble State, and giving tuition practically free. She has a Baptist literary and theological institution, Mercer University, founded in 1829. She has the great Methodist institution of the Georgia and Florida Conferences, Emory College. She has the Catholic College of Pio Nono at Macon, which has attained an enviable reputation. She has half a dozen agricultural and mechanical colleges, at Athens, Dahlonega, Milledgeville, Thomasville, Cuthbert, and Hamilton, which are valuable aids to the education of their localities, even if we say nothing at all about their use as ancillary to the university. She has notable colleges for young women at Macon and Athens. She has a splendid and well-endowed colored institution, Atlanta University."

In Georgia colored people own 600,000 acres of land, and pay taxes on about $10,000,000 of property. In the whole of the South their taxable property is put down at about $100,000,000. In Georgia taxes paid by the colored race are almost as much as the sum devoted to the colored schools of that State.

GERMANY, an empire in Europe, formed by the union of the German states, consummated on May 4, 1871, when the Constitution of the German Empire replaced the articles of confederation between the North German states and the treaties by which the Grand Duchies of Baden and Hesse and the Kingdoms of Bavaria and Würtemberg entered the League during the Franco-Prussian War. King Wilhelm I of Prussia was proclaimed German Emperor from Versailles on the 18th of January, 1871. He was born March 22, 1797, and ascended the Prussian throne on the death of his brother, Jan. 2, 1861. The heir-apparent is Prince Friedrich Wilhelm, who was born Oct. 18, 1831.

The sovereign powers of the confederation of states forming the empire are vested in the Prussian crown and the Federal Council, but the concurrence of the Reichstag is necessary to the exercise of certain functions. The popular assembly possesses, also, certain rights of control over the acts of the Government. The Bundesrath contained 62 members, of whom 17 are representatives of Prussia, 6 of Bavaria, 4 each of Saxony and Würtemberg, 3 each of Baden and Hesse, 2 each of Schwerin and Brunswick, and 1 each of the other states and free cities, while the Reichsland Alsace-Lorraine sends 4 commissioners. The members of the Reichstag, 397 in number, are elected by universal suffrage and by ballot, for the term of three years. The Bundesrath is presided over by the Chancellor of the Empire, who, as representative of the Bundesrath, has a right to interpose in the deliberations of the Reichstag. All imperial laws must receive the votes of a majority in each house, and the assent of the Emperor, countersigned by the Chancellor.

The Chancellor of the Empire, Prince Otto von Bismarck, fills the posts of President of the Council of Ministers, President of the Federal Council, Minister of Foreign Affairs, and Prussian Minister of Commerce. In the office of Foreign Affairs his chief subordinate is Count von Hatzfeldt, Secretary of State. The Secretary of State for the Interior is Minister von Bötticher. The Chief of the Admiralty is Gen. von Caprivi, appointed March 8, 1883. The Secretary of State for Justice is Dr. von Schelling; Financial Secretary of State, Herr von Burchard; Chief of the Post-Office, Dr. Stephan; Minister of Railroads and Prussian Minister of Public Works, Dr. Maybach.

The Prussian ministry is composed as follows: President, Prince Bismarck, Minister of Foreign Affairs and of Commerce; Vice-President, Herr von Puttkamer, Minister of the Interior; Agriculture and Domains and Forests, Dr. Lucius; Justice, Dr. Friedberg; Ecclesiastical Affairs, Von Gossler; Finance, Herr von Scholtz; War, Lieut.-Gen. Bronsart von Schellendorf; without a portfolio, Count von Hatzfeldt-Wildenburg.

Area and Population.—The area of the empire is 212,028 square miles. The population on Dec. 1, 1880, was 45,234,061, comprising 22,185,433 males and 23,048,628 females. The density of population varies from 438 per square mile in Saxony, to 100 in Mecklenburg-Strelitz, the average being 213. The inhabitants of cities and towns of a population exceeding 2,000 constitute 41·4 per cent. of the total population, 7·24 per cent. living in the 14 largest towns, 8·90 per cent. in the 102 towns of medium size, 12·54 per cent. in 641 small towns, and 12·71 in 1,950 country towns.

About 7 per cent. of the total population belong to non-German races, consisting of 2,454,000 Poles in the Prussian provinces of Posen, Silesia, and East and West Prussia, 280,000 Walloons and French, 150,000 Lithuanians, 140,000 Danes, and about as many Wends, Moravians, and Bohemians. The total population in 1880 was divided in respect to religion into 28,331,152 Protestants, 16,232,651 Roman Catholics, 78,031 of other Christian sects, 561,612 Jews, and 30,615 of no religion.

The number of marriages in 1882 was 350,457, against 338,909 in 1881; of births, 1,769,501, against 1,748,686; of deaths, 1,244,006, against 1,222,928; the surplus of births over deaths, 525,495, against 525,758. Of the births, 9·29 per cent. were illegitimate.

The number of emigrants in 1883 was 166,119, of whom 159,894 went to the United States; in 1882, 193,869, of whom 189,373 were destined for the United States; in 1881, 210,547, the United States receiving 206,189. The emigration by way of Havre, not included above, was 9,590 in 1882, and 10,251 in 1881. The emigrants in 1883 comprised 93,800 of the male and 73,319 of the female sex, and included 26,452 families containing 98,749 persons. The number of foreigners living in Germany in 1880 was 275,856, of whom 10,326 were Americans.

The population of Prussia, which has an extent of 137,066 square miles, was 27,279,111 in 1880; that of Bavaria, with an area of 29,292 square miles, 5,284,778; that of Würtemberg, 7,675 square miles in extent, 1,971,118; that of Saxony, area 6,777 square miles, 2,972,805; that of Baden, area 5,851 square miles, 1,570,254; that of Alsace-Lorraine, area 5,580 square miles, 1,566,670.

The cities containing more than 100,000 inhabitants are the following: Berlin, 1,122,360; Hamburg, 289,859, with suburbs 410,127; Breslau, 272,912; Munich, 230,023; Dresden, 222,241 (1882); Leipsic, 154,345 (1882); Cologne, 144,772; Königsberg, 140,909; Magdeburg, 137,135; Frankfort-on-the-Main, 136,-

819; Hanover, 122,843, with Linden 145,227; Stuttgart, 117,303; Bremen, 112,453; Dantzic, 108,551; Strasburg, 104,471.

Education.—Elementary education is compulsory. Schools are supported from the local taxes. There are about 57,000 primary schools in Germany, with 120,000 teachers and 7,100,000 pupils; 332 normal schools, with 26,281 pupils; and 1,100 intermediate schools, with 13,485 teachers and 231,214 pupils. The number of universities is 21, the largest being the one at Berlin, with 264 professors and tutors and 4,154 students; Leipsic coming next, with 3,160 students; and then Munich, with 2,511; and Heidelberg, Tübingen, Breslau, Würzburg, Bonn, and Göttingen, with over 1,000 each.

Commerce and Industry.—The total value of imports during the calendar year 1883 was $783,233,000, as compared with $753,191,000 in 1882, and $711,680,000 in 1881; the total value of exports in 1883 was $793,730,000, as compared with $772,217,000 in 1882, and $723,622,000 in 1881. The imports of live animals in 1883 were valued at $53,001,000, exports $38,455,000; imports of food and other articles of consumption $200,922,000, exports $126,010,000; imports of seeds and plants $25,465,000, exports $7,415,000; imports of manure and waste materials $16,269,000, exports $5,055,000; imports of fuel $10,105,000, exports $18,179,000; imports of raw materials and products of the chemical industry $92,910,000, exports $64,526; imports of materials and manufactures of the pottery and glass industries $10,380,000, exports $28,097,000; imports of raw materials and manufactured products of the metal industries $32,105,000, exports $102,053,000; imports of raw materials and products of the wood and straw industries $30,583,000, exports $24,330,000; imports of paper materials and manufactures $3,535,000, exports $18,872,000; imports of leather and fur materials and products $44,056,000, exports $60,488,000; imports of raw materials and manufactures of the textile and felt industries $237,644,000, exports $227,160,000; imports of caoutchouc and wax materials and manufactures $6,265,000, exports $5,367,000; imports of cars, carriages, and furniture $148,000, exports $1,774,000; imports of machines, engines, instruments, and apparatus, $11,893,000, exports $33,842,000; imports of fancy goods and ornaments $3,046,000, exports $19,520,000; imports of objects of literature and art $5,006,000, exports $12,539,000; exports not declared $48,000; total imports, exclusive of goods in transit, $783,233,000; total domestic exports, $793,730,000. Including goods in transit, the total value of the imports of 1883 was $1,210,545,000, the total weight of merchandise 204,551,933 metric quintals; the total value of the exports, weighing in the aggregate 200,284,491 metric quintals, was $1,211,346,000.

Of the total import of raw cotton, amounting to 1,891,043 quintals, not including goods in transit, 542,113 quintals were imported directly from the United States; of 6,371,348 quintals of wheat, 373,730; of 7,751,899 quintals of rye, 172,251; of 1,771,289 quintals of corn, 315,062; of 303,133 quintals of tobacco, 28,977; of 103,225 quintals of meat, 8,884; of 310,253 quintals of lard, 85,688; of 3,698,253 quintals of petroleum, 1,296,629. Of 62,747 metric quintals of cotton hosiery exported, 26,547 went to the United States; of 124,395 quintals of wine, 24,940; of 44,304 quintals of clothing, 4,680; of 175,733 quintals of woolen cloths, 15,703.

The sugar industry continues depressed, and the effects on agriculture grow more serious. The sugar bounty that has over-stimulated this industry was established to some extent unintentionally. The Government estimates drawbacks on the assumption that one part in eleven of the sugar-beet is recovered as sugar, whereas improved methods enable manufacturers to get one ninth of the weight of the beets in sugar. In 1881 there were 338 sugar-mills in operation, and in 1884 the number had increased to 390. The price of raw sugar went down from $6.84 per cwt. in 1881 to $4.42 in 1884. The quantity of beets consumed in 1883 was more than 193,000,000 cwt., and in 1884 as much as 250,000,000 cwt. were produced. Formerly the factories paid 1·25 marks or more per cwt., but the price sank to 60 pfennigs in 1885. The quantity of raw sugar produced in 1882–'83 was 18,373,630 cwt., against 13,193,884 in 1881–'82, and 12,230,130 in 1880–'81; the quantity exported, 10,396,144 cwt., against 6.917,020 in 1881–'82, and 6,245,888 in 1880–'81. The taxes on sugar yielded $33,718,935 in 1882–'83. The quantity of tobacco harvested in 1882–'83 was 38,977 tons, valued at $3,909,864. The consumption of beer in 1882–'83 was 38,429,000 hectolitres, 85 litres per capita, or 2·6 litres less than the average for eleven years. The number of horses in 1883 was 3,522,316, of cattle 15,785,322, of sheep 19,185,362, of hogs 9,205,791. In 1883 there was a net import of 57,439 horses and 508,680 hogs, and a next export of 38,780 oxen and 1,343,297 sheep.

The product of the coal-mines in 1883 was valued at $79,000,000, the product of pig-iron at $45,836,000, of zinc $8,556,000, of lead $5,995,000, of copper $5,817,000, of silver $8,196,000. The value of cast-iron manufactured was $26,841,000, of wrought-iron and steel $49,593,000, of ingot-iron and crucible steel $38,553,000.

Navigation.—The total number of vessels entered at German ports with cargo in 1882 was 43,214, of 7,532,677 tons, including 14,136 steamers, of 5,308,118 tons; the number cleared with cargo, 39,901, of 6,223,622 tons, of which 12,849, of 4,440,545 tons, were steamers. Of the total tonnage entered, that employed in the German coasting trade was 1,048,966; in trade with European ports, 4,734,893; with extra-European ports, 1,748,818. The tonnage under foreign flags was 3,906,-

106; the steam tonnage, 2,968,956. Under the British flag, 4,305 vessels, of 2,376,610 tons, were entered. The Danish tonnage was 392,729; the Norwegian, 381,407; the Swedish, 337,576. The tonnage entered from Great Britain was 3,005,608; from the United States, 1,063,214; from Denmark, 413,477; from Russia, 399,366.

The German merchant navy numbered 3,712 sailing ships, of 849,778 tons, on Jan. 1, 1884. The number on the Baltic coast was 1,428, of 327,431 tons; on the coast of the North Sea, 2,284, of 567,347 tons. The number of sailors employed was 26,937. The number of steam vessels was 603, of 374,699 tons—107,017 tons on the Baltic, and 267,682 on the North Sea coast; the crews numbered 12,678 persons. The aggregate tonnage was 1,269,477.

Railroads.—In 1884 there were in Prussia 20,481 kilometres of railroads owned or administered by the state, and 1,765 owned and administered by companies; total, 22,246 kilometres, or 13,904 miles. Bavaria had 3,150 miles, of which 2,680 miles were the property of the state. Würtemberg had 973 miles, all owned by the state except 10 miles. In Saxony there were 1,348 miles; in Baden, 830 miles; in Mecklenburg-Schwerin and Mecklenburg-Strelitz, 300 miles; in Hesse, 566 miles, of which 140 miles belonged to the state; in Oldenburg, 203 miles; in Brunswick, 238 miles; in Saxe-Weimar, 121 miles; in Saxe-Meiningen, 114 miles; in Saxe-Coburg-Gotha, 16 miles; in Saxe-Altenburg, 5 miles; in Schwarzburg-Sondershausen, 18 miles; in Schaumburg-Lippe, 15 miles belonging to the state; Hamburg had 12 miles; Lübeck, 25 miles; Bremen, 65 miles; and in the Reichsland of Alsace-Lorraine there were 815 miles.

The Army.—Every able-bodied man serves seven years in the army, three in active service and four in the reserve, and is liable to be called out with the Landwehr for five years longer. Only about 160,000 recruits are actually drafted into the army annually, besides 5,000 one-year volunteers and 5,000 for the marine. In 1884 there were 161 regiments of infantry and 20 Jäger battalions, making, with the Landwehr depots, a total infantry force of 10,279 officers and 294,706 rank and file. The cavalry (93 regiments) numbered 2,358 officers and 64,699 men, with 62,550 horses; the field-artillery (37 regiments), 1,801 officers and 34,817 men, with 16,591 horses; the fortress artillery (14 regiments and 3 battalions), 729 officers and 16,349 men; the engineers (20 battalions besides a battalion of railway troops), 406 officers and 10,840 men; the train (18 battalions), 200 officers and 4,905 men, with 2,457 horses. Including the 2,032 officers of the staff, the special services, and 3,847 surgeons, paymasters, etc., the total peace strength is 449,239 officers and men, 81,598 horses, and 1,374 guns. The war strength is 35,400 officers, 1,500,000 men, 312,000 horses, and 2,500 guns. Each of the 17 army corps is prepared for immediate and independent mobilization. An army corps consists of two divisions of infantry, each divided into two brigades, and each brigade into two regiments of three battalions, with four squadrons of cavalry, four batteries of field-artillery of six guns each, and a battalion of riflemen or of pioneers attached to each division; a cavalry division of four regiments, with two batteries of horse-artillery attached; and a reserve of artillery, of six field-batteries and a mounted battery, besides a battalion of train and one of pioneers. The battalion of infantry numbers 544 men, divided into four companies, which in war are raised to 250 men each. The Landsturm and one-year volunteers, added to the troops enumerated above, bring the war strength up to 2,650,000 men trained to arms.

The Navy.—The effective navy in 1885 consisted of 64 ships with 479 guns, and 70 torpedo-boats. The *personnel* required to man the fleet is 15,850 sailors and marines, besides 80 for the torpedo-boats, and 2,000 for garrisoning naval fortifications, for torpedo-mines, etc. The number of line-of-battle ships is 13, 7 of them frigates and 6 corvettes. The most powerful are the frigates "Kaiser" and "Deutschland," protected with 10-inch plates and armed with 22-ton Krupp guns, four on each side for broadside firing, and a 10-ton stern-firing gun; and the "Friedrich der Grosse" and "Preussen," covered with 9 inches of armor, having two revolving turrets, each containing two 22-ton guns, besides smaller guns in the bow and stern. The German navy is particularly strong in coast-defense. The five large corvettes, the last of which, the "Oldenburg," was launched in 1885, are designed for operations in the Baltic. For coast-guards monitors and floating batteries have been abandoned for a type of ironclad gunboat armed with a single 36-ton gun, of which there are 13, besides one monitor, for the defense of the river-mouths and havens of the North Sea. They are supplemented by a still more complete and effective torpedo service. The 70 torpedo-boats, mostly small and lying low in the water, and capable of making 17 or 18 knots, were authorized in 1884. Of cruisers the Government possesses 10 spar-decked corvettes, now called cruiser frigates, 10 flush-decked or cruiser corvettes, 5 gunboats of the "Albatross" type, and four other gunboats. There are 8 avisos, making 37 unarmored vessels counted as effective. The 9 school-ships provided for in the scheme for the reorganization of the navy, adopted in 1873 and now completed, are on hand. In the summer of 1885 the navy sustained the loss of one of the cruiser corvettes enumerated above, the "Augusta," which was lost in the Indian Ocean with all on board, 223 men.

Finances.—The revenue is derived from the share of the Imperial Government in the customs, certain excise duties, the profits of the post-office and telegraphs, and minor sources.

The excess of expenditures over these receipts is made up by matricular contributions assessed on the states. The budget for the year ending March 31, 1885, makes the total expenditures 590,819,344 marks, of which 339,872,490 marks are devoted to the army, and 26,908,396 marks to the navy. In the total are included 46,491,478 marks of extraordinary expenditure. The receipts from customs and excise duties were 353,874,110 marks, and the matricular contributions were fixed at 83,702,768 marks. Among the other receipts was a loan of 22,192,720 marks. The budget for 1885–'86 fixes the total expenditure at 621,196,051 marks. The funded debt, bearing 4 per cent. interest, amounted in 1884 to 411,000,000 marks, and the unfunded debt, represented by treasury warrants, to 144,845,000 marks. The Government has invested funds amounting to 707,121,769 marks, comprising an invalid fund of 525,783,797 marks, a fortress construction fund of 38,877,623 marks, a fund for the Reichstag building of 22,460,354 marks, and a war emergency fund of 120,000,000 marks. The appropriation for expenditure was voted for one year only, until the Chancellor succeeded in obtaining credits for several years in advance "in special cases."

Prussia.—The budget estimates for the year ending with March, 1885, make the total revenue of the kingdom 1,133,616,378 marks, as compared with 1,083,057,883 in 1883–'84. The receipts from domains, etc., are estimated at 80,342,814 marks; from the land-tax, 40,139,000 marks; from the house-tax, 28,760,000 marks; from the income-tax, 34,722,000 marks; from the class-tax, 21,726,000 marks; from the trading-tax, 18,853,000 marks; from indirect taxes, 91,730,200 marks; from the produce of mines and furnaces, 102,415,049 marks; from the state railroads, 575,977,340 marks; from imperial customs, 49,951,450 marks; from deposits and interest, 23,706,101 marks; from the surplus of 1882–'83, 13,570,791 marks; from other sources, 51,722,033 marks.

Of the total expenditures, 37,899,090 marks are set down, under the head of current expenditure, to the account of the Ministry of Agriculture, Domains, and Forests; Ministry of Finance, 39,809,330 marks; administration of mines, etc., 84,855,068 marks; of railroads, 402,127,155 marks; making the total current expenditure 564,690,643 marks. The administrative expenditures foot up 252,658,605 marks, the principal items being 80,340,400 marks for the administration of justice, 53,159,355 for public worship and instruction, 42,641,190 for financial administration, 41,550,209 for the Department of the Interior, 17,626,665 for Public Works, and 12,092,988 for Agriculture, Domains, and Forests. The charges in the consolidated fund amount to 269,429,494 marks, of which sum 136,427,847 marks represent the interest on the public debt, including the railroad debt, 65,240,348 marks appanages, annuities, etc., 40,769,167 marks the contribution to imperial funds, and 19,108,113 marks the sinking fund. The total ordinary expenditures are estimated to amount to 1,086,778,742 marks, and the extraordinary expenditures are taken as 46,837,636 marks, making the total estimated disbursements balance with the estimated revenue. The preliminary estimates for 1885–'86 make the total revenue 1,257,725,000 marks, and the ordinary expenditures 1,221,175,788 marks.

The public debt amounted in 1885 to 3,315,097,438 marks, besides 30,000,000 marks of floating debt. The income from railways is almost sufficient to meet all the charges of the debt.

The Minor States.—The following table gives the revenue and expenditure, and the public debts of the other states of the confederation, in marks, as well as their area in square miles, and population in 1880:

STATES.	Revenue.	Expenditure.	Debt.	Area.	Population.
Bavaria (1885)	234,400,000	234,400,000	1,346,000,000	29,292	5,284,778
Würtemberg (1885)	54,000,000	54,000,000	426,000,000	7,675	1,971,118
Saxony (1885)	69,000,000	69,000,000	664,000,000	6,777	2,972,805
Baden (1885)	41,100,000	39,200,000	338,000,000	5,851	1,570,254
Mecklenburg-Schwerin	....	....	44,000,000	4.834	577,055
Hesse	5,800,000	5,700,000	40.000,000	2,866	936,340
Oldenburg (1884)	7,000,000	7,200,000	38,000,000	2.417	337,478
Brunswick (1884)	9,000,000	9.000,000	79,000,000	1,526	349,867
Saxe-Weimar (1885)	6,300,000	6,200,000	6,000,000	1,421	309,577
Mecklenburg-Strelitz	....	....	6,000,000	997	100,269
Saxe-Meningen (1885)	5,000,000	4,400,000	20,000,000	933	207,075
Anhalt (1885)	17,900,000	17,900,000	5,000,000	869	232,592
Saxe-Coburg (1885)	4.700,000	5.000,000	11,000,000	816	194,716
Saxe-Altenburg (1885)	2,500,000	2,500,000	1,000,000	509	155,036
Waldeck (1885)	1.000,000	900.000	2,000,000	466	56,522
Lippe (1885)	900,000	900,000	1,000.000	445	120,246
Schwarzenburg-Rudolstadt (1884)	1,900,000	1,900,000	4,000,000	340	80,296
Schwarzenburg-Sondershausen (1885)	2,200,000	2,200,000	4,000,000	318	71,107
Reuss-Schleiz (1885)	1,300,000	1,300,000	1,000,000	297	101,830
Schaumburg-Lippe (1885)	500,000	500,000	1,000,000	212	35,374
Reuss-Greiz (1885)	700,000	700,000	1,000,000	148	50,782
Hamburg (1885)	1,800,000	1,800,000	142,000,000	148	453,869
Lübeck (1885)	2,600,000	2,600,000	21,000,000	127	63.571
Bremen (1884)	11,500,000	11,500,000	78,000,000	98	156,723
Alsace-Lorraine (1885)	40,500,000	40,500,000	1,000,000	5,580	1,566,670
Total	522,500,000	520,000,000	3,280,000,000	74,962	17,954,950

The Legislature in most of the states does not meet annually, and the budgets are made out for periods of two or three years. In the two Mecklenburgs the expenses of Government are defrayed from the grand-ducal revenues and no accounts are published. The greater part of the debt in all the states was contracted for railroads. Most of them have productive property nearly or quite equal in value to the capital of the debt.

Colonial Possessions.—During 1884 and 1885 a number of territories on the coast of Africa and in the South Sea were taken under German protection. On the west coast of Africa were annexed Angra Pequeña and Hüderitzland, with a protectorate over the Nama and Damara tribes; Cameroons and Bimbia and all the coast between the British oil-river territory and the French colony of Gaboon (see CAMEROONS); and Togo and Bagida on the Slave Coast. On the east coast a protectorate was assumed over a district bordering on Zanzibar (see ZANZIBAR). In the Pacific Ocean the German flag was raised over a part of the coast of Papua (see PAPUA), the Admiralty Islands, the Duke of York group, a part of New Britain and adjacent islands, and various small islands in Micronesia.

In the various controversies with Great Britain the clear purposes of the German Chancellor enabled him to score diplomatic triumphs over the British ministry, distracted by conflicting colonial and foreign interests (see CAMEROONS and CAPE COLONY). In the Angra Pequeña dispute the English authorities were deterred from claiming prior sovereign rights, in compliance with the desire of Cape Colony, by the consideration of the fact that the port was used as a coaling-station by one of the English-built privateers that preyed upon American commerce during the war of secession. Though constrained to abandon its claims to the Caroline and Pelew groups (see CAROLINE ISLANDS), the German Government subsequently established a protectorate over the Marshall and Gilbert Islands. Germany and France supported each other in their colonial aims, but the alliance was weakened by the failure of France at the Congo Conference to second the German proposals respecting the Niger, and her assertion, in combination with Portugal, of sovereign rights over a large part of the territory claimed by the Congo Association (see CONGO FREE STATE). Soon after, the German flag was hoisted on the Dubrecka river, in the midst of the French possessions in Senegambia. The extent of the German annexations in the South Sea made in the latter part of 1884 and the beginning of 1885 were estimated as follows: Kaiser Wilhelm's Land, or German New Guinea, 52,000 square miles; New Ireland, 3,400 square miles; Bismarck Archipelago, 15,000 square miles; New Britain, 9,350 square miles.

Political Parties.—In 1879 the National Liberal party that had formed the ministerial majority for twelve years, split on the question of protection. The Secessionists, who opposed the economic plans of the Chancellor, afterward united with the Liberalists to form the Liberal Union, and in the spring of 1884 the Liberal Union and the Progressists combined with the German Liberal party. The Chancellor, by making concessions to the Clericals, and by favoring the interests of the land-owners, obtained an unstable majority composed of the Center, the Conservatives, and a remnant of the old National Liberal party. The German Liberals lost ground by opposing Prince Bismarck's protectionist, socialistic, and colonial schemes, yet the Government failed to obtain, as the result of the election of 1884, a majority made up of the middle parties that would enable it to dispense with the support of the Clericals. The seats in the Reichstag are distributed among the various factions as follows: Center, 100; Conservatives, 75; Free Conservatives, 30; National Liberals, 52; German Liberals, 66; People's party, 7; Social Democrats, 24; Poles, 16; Alsatians, 15; Guelphs, 8; Danes, 1; Independent, 3.

Session of the Reichstag.—The speech from the throne with which the Emperor opened the Reichstag on Nov. 20, 1884, dwelt more than usual on foreign and colonial affairs. On a question of procedure, and again on a resolution in favor of paying deputies, the Chancellor found a majority of 199 to 157 arrayed against him. In favor of Windthorst's motion to repeal exceptional laws there was a majority of 217 to 93. Prince Bismarck spoke disdainfully of the renewal of these motions, already denied by the Federal Council. The increase of 41,000,000 marks in the contributions from the states laid the Government open to attacks directed against its economic policy, against the military system, and against recent expenditures for military and other purposes. On Dec. 15 the Reichstag refused to vote 20,000 marks for another assistant in the Foreign Office, an action which Prince Bismarck treated as an affront, and which embittered his relations with his Progressist opponents and was condemned even by the constituents of the latter. The Progressist leaders changed with the popular current, and on the 10th of January voted for establishing a governor at Cameroons and providing him with a steamer. On March 4 the Liberalists, under the lead of Rickert, changed their vote of Dec. 15, and the grant for a new director in the foreign office was carried. On March 16 a remarkable debate, in which Prince Bismarck reiterated his complaints of the factious pursuit of party ends that threatened to destroy "the glorious work of peace created and solidified with blood and iron," ended with a vote of 4,000,000 marks to subsidize a steamship line to Australia and Asia and a branch line from Trieste to Egypt. A grant for a West African line was refused. In various other particulars the opposition to Bismarck's colonial policy broke down, and grants were made for the administrative organization of the new colonies, for new consulships, etc. In the field of social-economic legislation the Reichstag acceded to the proposition of the Government to extend workmen's insurance to the transportation industry. Bills introduced by the Social Democrats and the Clericals and Conservatives for the establishment of a normal work-day, the restriction of female and juvenile labor, and the prohibition of Sunday labor, though the discussion of these questions was welcomed by the Government, made little progress. Windthorst's motion for the repeal of the law of exile against the clergy was carried again by a large majority before the prorogation of the Reichstag on May 15. The Bourse tax proposed by the Government was approved. The rate is $\frac{1}{100}$ per cent. on Bourse transactions and $\frac{2}{100}$ per cent. on outside purchases. The most important work of the session was the revision of the tariff.

Revision of the Tariff.—The general tariff act, introducing high protective duties, was signed by the Emperor, July 15, 1879. In manufacturing Germany has gained of late years at the expense of other industrial nations; but farming has become unremunerative, and the industrial progress achieved with difficulty under the conditions of intense competition prevailing in Europe has been qualified by a depression in agriculture, continuing in good and bad seasons alike. The idea of protection for agriculture was more likely to find favor with Prince Bismarck, from the fact that he now relied on the rural class, particularly the large land-owners, for political support. Early in the session of 1884–'85 the Government brought in a bill to amend the tariff of 1879. Its most important feature was a large increase in the duty on foreign grain. In order to prevent the flooding of the market with imported cereals and other agricultural produce in anticipation of the passage of the tariff bill, the Government was empowered by a special act in February to levy the proposed duties at once on grain and mill products, and also on bottled wines. The amended tariff act was adopted by the Reichstag on May 22, and published May 28. The vote was 187 to 139, the Conservatives, the Reichspartei, a majority of the Center, the Poles, and a number of National Liberals voting for, and the majority of the National Liberals, the German Liberals, the Popularists, and the Social Democrats against the measure.

The duty on wheat is raised from 1 to 3 marks per 100 kilogrammes, also that on rye. On oats and barley, and on malt, a duty of 1½ mark was imposed; on corn, buckwheat, and other cereals, and also pulse, 1 mark. On rape-seed, peanuts, and certain other oil-fruits, the duty is 2 marks; but cotton-seed and other materials necessary for the German oil-mills are free. On flour and other mill-products the rate is raised from 3 to 7·50 marks. As Germany has a treaty with Spain fixing the duty on rye at 1 mark per metric quintal until June 30, 1887, American rye, under the most-favored-nation treatment secured by the treaty of 1828 with Prussia, can be imported on the same terms. The new tariff places duties on timber and cabinet-wood 1·20 mark per cubic metre on logs, 1·40 mark on hewn timber, and 6 marks on boards and other sawn timber; on cedar-wood the duty is 25 marks per quintal, or 150 marks per cubic metre. Watches are taxed from ½ mark to 3 marks. On ornamental feathers and artificial flowers the duty is trebled. On spirituous liquors the duty is raised from 47½ to 80 marks per 100 kilos; the same duty is levied on foaming wine in bottles, while other wines are charged 47½ marks. On meat, fresh or preserved, a duty of 20 marks is laid; on salt fish, 3 marks; on pickled, 12 marks per 100 kilos. The duties on linen and on silk manufactures are raised. On oysters and lobsters 50 marks are levied, instead of 24. The duties on vegetable oils are increased; that on lard remains 10 marks as before. Soap and candle grease can be imported under control at 2 marks. The duty on petroleum is 6 marks—the same as before; but lubricating oils, formerly free, are taxed 10 marks. Petroleum can be imported for refining purposes, the duty being collected afterward on the illuminating and lubricating oil manufactured, but none on the by-products. American oil was already placed at a disadvantage by having to pay duty on the barrels, while Russian oil is brought in cars. A bill was introduced to tax barrels at a higher rate than the oil they contained. American petroleum-barrels are found useful for the products of the newly developed petroleum industry of Galicia, in Austria, and help to sell the oil. On live animals the following rates of duty are fixed: horses, 20 marks; donkeys, mules, and asses, 10 marks; bulls and cows, 9 marks; oxen, 30 marks; calves 3, and young cattle, 6 marks; sheep, 1 mark; sucking pigs, 1 mark; lambs, ½ mark; goats, free. Duties were imposed, also, in spite of vigorous protests, on honey, slate, cocoa, sewing-silk, and other articles. In support of the timber duties the ministers argued that the lumbermen would be benefited, and not merely proprietors of forests, and in support of the grain-tax they contested that the duties would be borne in great measure by foreign importers, and the price of bread not affected.

The Prussian Landtag.—The Prussian Diet closed its session, the last of the legislative period, on May 11. The principal acts of the period were the nationalization of railroads and the authorization of secondary lines, the lowering of the rate of interest on the consolidated debt, the land ordinances for Brandenburg and Silesia, the simplification of the system of local government and the extension of local self-government to Hanover and Hesse-Cassel, an act of the last session, the abolition of the class-tax for the two lowest classes, and the revision of the May laws. The increase of revenue accruing to Prussia from the new tariff was made applicable, by a bill introduced by the Clericals and accepted by the ministry in return for clerical support of the protective duties on agricultural products, to the expenses of the local bodies. One third of the share of Prussia in the grain and cattle duties is assigned to the circles in proportion to their population, and the remaining two thirds in proportion to the amount of land and house taxes collected. Another important act, opposed by the Center party, was the bill to pension school-teachers, thus placing them on an equal footing with other officials. Every teacher who has served ten years is entitled, if incapacitated from any cause, to a pension for life equal to one fourth of his salary, and to one-sixtieth more for each additional year of service. At sixty-five he is at liberty to retire on a pension without proof of disability.

State Lotteries.—For many years the question of abolishing the state lottery was brought up frequently in the Prussian Diet. In 1867 a resolution in favor of its speedy abolition was adopted. The suppression of all lotteries was proposed in the Reichstag in 1869, but rejected on the ground that it was beyond the powers of the Central Government. Since that period, the minor states that have lotteries have enlarged them threefold, and on Feb. 11, 1885, a motion to double the operations of the Prussian lottery was before the Landtag and was negatived by a bare majority of 155 to 150 votes. The Prussian Government issues 95,000 lottery-tickets a year, of the total value of 13,728,000 marks, and derives a net revenue from the institution of 3,944,800 marks. The Royal Saxon lottery turns over 18,135,000 marks, yielding 4,645,570 net profit to the state; the Brunswick lottery 10,402,000 marks, yielding 1,169,000 marks; the Hamburg lottery 9,620,100 marks, yielding 1,454,000 marks; the Mecklenburg-Schwerin lottery 1,831,506 marks, yielding 439,560 marks for two drawings. Each of these states holds its lottery-game twice a year. The total sum of the chances sold in all five each year is 112,804,860 marks, including the imperial stamp duty of 5,371,660 marks. Besides the state lotteries a great number of private lotteries are authorized for religions and charitable purposes. These always yield exorbitant profits, and freqnently cloak schemes of swindling and private greed.

Beginning of the Session of 1885–'86.—The Reichstag was opened Nov. 19. The Government asked for an increase in the army and navy estimates, to be devoted to pensions, which would require the return in the form of matricular contributions of a part of the increased revenue of the states proceeding from the new tariff and the stamp duties. To satisfy their financial wants, it purposed introducing bills for a sugar-tax, deferred hitherto on account of the depressed state of agriculture, and a tax on spirits. A bill for the extension of the accident-insurance law, which went into force Oct. 1, to agricultural and forest laborers, was promised; also a measure for the relief of officials and soldiers in case of accidents.

The North Sea Canal.—The project of a canal to connect the Baltic with the Elbe and the German Ocean, which has been under the consideration of the Prussian Government since 1865, was another feature in the programme of the Government. It will cost about 156,000,000 marks, of which Prussia offers to contribute 50,000,000. It will be strongly fortified. The bill for the construction of the canal was unanimously approved by the Bundesrath. The North Sea and the Baltic are already connected by the Eider Canal, which accommodates only small vessels and costs a great deal to maintain; also by the ancient Steckenitz Canal. The project in favor with the authorities is to dig a canal from Kiel Bay southwestward to Brunsbüttel, at the mouth of the Elbe, 50 miles. This would prevent the Scandinavian powers from forming a hostile combination that could shut up the German Baltic fleet, as they now have the power of doing; it would also save the 500 German lives that are lost, and the $2,500,000 worth of property wrecked annually, in the Cattegat and Skager-Rack, and would tend to the commercial development of the districts skirting the Baltic, and especially of the port of Kiel. Its utility will be vastly enhanced if means can be invented to keep it clear of ice, which otherwise will stop traffic for four months of the year.

Socialism.—A treaty for the extradition of political offenders was concluded between Prussia and Russia Jan. 13, 1885. Prince Bismarck presented a bill in the Reichstag to extend the provisions of the treaty to the whole of Germany, but there was such an outcry against it that the measure was never debated. A treaty containing the same provisions had been signed on behalf of the Imperial Government. Assaults on officials, and even insults, verbal or published in the press, were made extraditable offenses. An attempt was made to induce the individual states to adopt this law. The several states made the same treaty arrangements with Russia that Prussia had. The Bavarian ministry introduced a bill to give effect to the treaty, but this effort to override the Reichstag found no favor with the Diet. In this matter Prince Bismarck did not mind the flagrant transgression of the spirit of the Constitution, according to which the Emperor represents Germany in her international relations, though an independent attempt of any of the states to deal with a foreign power would be sure to meet with his reprobation.

In the evening of January 13 Herr Rumpff, the head of the police force of Frankfort-on-the-Main, who had been chiefly instrumental in the discovery of the Niederwald plot, and was exceedingly active in combating the Anarchists, was murdered in front of his house. He had rendered himself obnoxious by the duplicity and cruelty of his detective devices, not only to the Anarchists, but to all the Liberal parties. A great number of persons were arrested without results, until a man was taken near Mannheim with false papers, who defended himself with a revolver. He was discovered to be Julius Lieske, a shoemaker, twenty-two years old, who had associated with Anarchists in Switzerland. He was tried in July and convicted of the murder, chiefly on the evidence of a woman who recognized him as having been in Frankfort at the time of the murder. The altered position of the Social Democrats since their electoral success in 1884 is illustrated in a remark made by the judge to the jury that they have nothing in common with Anarchists. The Reichstag has bestowed on their arguments attention and consideration that they could not formerly command. The official press praises their debating powers, and treats their legislative schemes as being in the line of the aims of the Government and the tendency of the time, but too radical and advanced. The effect on the parliamentary representatives is to lead them to address themselves to practical legislative objects, instead of using the Reichstag as a rostrum from which to appeal to the constituencies in langnage forbidden outside. Among the rank and file of the party, smarting under police repression and persecution, and cherishing revolutionary aims, dissatisfaction is felt at the more correct parliamentary attitude of their leaders.

At the burial of a Social Democrat named Hiller in Frankfort, on July 22, red sashes were worn, and an attempt was made to hold orations, though demonstrations had been forbidden. The police ordered the assembly to disperse and then dashed into the crowd, and with the edge of their sabers wounded many people, some of them women and children.

By the decision of the Federal Council the minor state of siege was prolonged in Berlin, Leipsic, and Hamburg. Herr Liebknecht, the Social Democratic deputy, was sentenced to a month's imprisonment. Six other prominent members of the party, all of them deputies in the Reichstag, were brought to trial in October for attending the conferences at Copenhagen in 1883 and at Wyden in 1880, on the charge of belonging to a secret international revolutionary organization; but they were all acquitted. In the annual report to the Reichstag on the working of the anti-Socialist law, made November 24, the Government deplored the spread of Social Democracy, notwithstanding repressive measures, due partly to the importation of revolutionary literature from other countries, and especially of John Most's "Freiheit," of which 5,000 copies are printed in New York, and all but 500 sent abroad, mostly to Germany and Austria, without any chance of their ever being paid for. In recent numbers this sheet has discussed theoretically the formation of battalions of working-men, and has described in minute and scientific detail how explosives may be chemically prepared, stored, and employed for the destruction of life and property. The "Social Demokrat," the organ of the party, is smuggled into the country as extensively as ever. In Berlin meetings were dissolved and interdicts issued in 175 cases during the year. The strikes in the capital are ascribed to the influence of Social Democrats. In Hamburg and Leipsic the Social Democratic movement is directed by an organization that defies the detective skill of the police.

The Brunswick Succession.—Prussia introduced a resolution, carried by a majority vote of the states in the Federal Council, that the rule of the Duke of Cumberland in Brunswick would not be conducive to the internal peace and security of the empire. The form of the resolution was changed by the judicial committee into a declaration that the rule of the Duke of Cumberland over Brunswick would be incompatible with the Constitution of the empire. In a secret session of the Brunswick Diet on June 30 he was declared to be practically disqualified by a unanimous vote. Though Brunswick at first refrained from voting on the question in the Bundesrath, the disclosure of a letter addressed by the Duke to the Queen of England on Jan. 14, 1879, inclosed in one of different import sent to the Duke of Brunswick, impelled the ministry and legislature to concur in the decision of the Bundesrath, on which the final vote was taken July 2. In this letter the Duke of Cumberland affirmed that he could fulfill the duties of Duke of Brunswick without prejudice to his rights to the Hanoverian throne. The claim of the Duke of Cambridge next came up. He expressed a willingness, in case the claims of the legitimate prince were disallowed, to accept the regency of Brunswick, or eventually, as next in the order of succession, the throne itself, bnt without giving up his residence in London and his position as commander-in-chief of the British army. Not only was this proposal rejected, but the Prussian ministry prepared a measure for the Bundesrath to exclude non-German princes from succession to the throne of any of the states of the empire, which would shut out the Duke of Edinburgh from the Duchy of Saxe-Coburg-Gotha, of which he is the heir-apparent. The Brunswick regency law provided that if the rightful heir is incapacitated, the Langtag shall select a regent. The Landtag referred the Duke of Cambridge's request to the German Emperor, and it was decided by the Bundesrath. A regent was finally selected in the person of Prince Albert of Prussia, nephew of the Emperor, who was elected in due form by the Diet, Oct. 21. The entry of the Prince Regent into Brunswick took place on Nov. 2.

Expulsion of Russian Poles.—In the summer of 1885 the Prussian Government, on the authority of a simple royal decree, began the wholesale expulsion of foreigners from the Polish provinces and neighboring districts of Prussia.

The ordinance directed that all people of Polish language not born in German territory should leave the empire. This act was an invasion of the powers of the Bundesrath, and a breach of international law and comity. Russia and Austria, however, raised no protest; and, though severely attacked in the Reichstag, Prince Bismarck asserted that the matter lay within the powers of the Prussian Crown. All the Jewish intermediaries in the grain-trade, the only class speaking both Russian and German, received notice to leave. Some cities were stripped of a fourth of their inhabitants, and trade and industry were paralyzed. The exiled persons belonged to all classes, the great majority being artisans and laborers. Before Sept. 1, as many as 20,000 persons, including 5,000 Jews, were said to have been sent back to Russia and Austria from the eastern provinces of Prussia. By the middle of November the number banished was 35,000. Many of them were prosperous residents who had long been settled on Prussian soil. The motives for the expulsions were twofold: to protect the native laborers and business-men from the competition of the immigrants; and to prevent the increase of the Polish element, and the consequent spread of political disaffection. There were many cases of extreme hardship. Rich and poor, nobles and peasants, persons domiciled forty years in Prussia, and knowing no language but German, persons having English and French naturalization certificates and passports, persons lying on sick-beds, women about to be confined, all fell under the inexorable edict alike. Houses, lands, stock, and plant were sacrificed in hasty sales. In November there were reported to be 1,500 persons encamped on the Russian frontier, whom the Russian authorities refused to receive because they had no papers proving them to be subjects of the Czar. Many Poles who had served in the Prussian army, and were on the Landwehr lists, were classed as aliens. The expulsions took place in accordance with a secret understanding with the Russian Government, which raised no objections. In Austria great indignation was felt. About 2,000 of the exiles were Austrian Poles. Yet Count Kalnoky in the Delegations minimized and palliated the proceedings, and said that he could not interfere with the operation of Prussian municipal law. In Galicia the exiles were received by committees that looked after their relief and aided them in obtaining homes and occupation.

Expulsion of Americans.—While the barbarous wholesale riddance of alien Jewish and Catholic Poles was proceeding, the German authorities began to order German Americans to leave Germany. A number of Americans on the island of Föhr, near Kiel, received a notice to quit, which was recalled, and then renewed, and again suspended in the beginning of December upon the intervention of Minister Pendleton. Two other naturalized Americans, staying at the Prussian seaport of Hadersleben, were ordered to leave Germany about the same time.

The Fiji Controversy.—A dispute with England, with respect to land-titles acquired by Germans in the Fiji Islands, dates from the annexation of the islands by Great Britain in 1874. Sir Hercules Robinson, Governor of New South Wales at the time, after proclaiming British sovereignty, issued a statute of limitations, annulling all debts and contracts existing before 1871. The German consul protested that his countrymen had invested much capital, especially in land, before that date. The German Government felt no anxiety respecting the rights of Germans, until Lords Derby and Carnarvon declared that it was necessary to impose limits to claims against the former Fiji Government. In 1875 all claims antedating the British occupation were barred by a new ordinance, which Herr von Bülow said seemed "very much like a spoliation" of German interests. About three years later Count Münster pressed for the appointment of a mixed commission to determine titles of possession. The German investments were very large, those of a single firm amounting to $625,000. Sir Arthur Gordon promised to hasten the inquiry into land-claims, but the German authorities complained that nothing was done, and in 1882 Count Hatzfeldt urged the British Government to bring the matter to a conclusion. Lord Granville ordered an examination of the German claims; yet a year later Count Hatzfeldt again demanded that the well-acquired rights of Germans should be recognized, and that they should not be deprived of property lawfully acquired before the British annexation, without judicial sentence. The British Colonial Office at first expressed a willingness to agree to a commission under reservations, but finally declared it impossible, as matters stood, to acquiesce in the proposal. Count Münster replied that it was the decision of the British Government that was wanted, not the views of the Colonial Office. In December, 1883, Count Münster was again instructed to request a speedy answer to the proposal of a mixed commission, which was all the more needed, inasmuch as German claims had been disallowed without sufficient reason. In January, 1884, Lord Granville refused to entertain the proposal, giving his reasons in a memorandum. In April the German ambassador, in an urgent note, accompanied by a counter-memorandum, renewed the request. Lord Granville expressed a desire to oblige the German Government, but Lord Derby, the Colonial Minister, declared that it would be difficult to reverse previous acts of the Fiji Government in favor of Germans without extending the same privilege to Englishmen and Americans. The German Chancellor refused to have the claims of Germans first submitted to the British Government to examine whether they might be laid before a commission. When Prince Bismarck pressed again for an answer, Lord Granville, without waiting for the expected memorandum of the Colonial Office, proposed a mixed commission consisting of an English and a German official, to examine the indemnity claims and submit the results to their respective Governments. Count Hatzfeldt telegraphed acceptance of the proposal by the German Government, June 21, 1884.

The commissioners were appointed: by the German Government Dr. Krauel, consul-general in Australia, and by the English Government Mr. R. S. Wright. At the request of Lord Granville, the German Government agreed to the inquiry being conducted in London instead of at Levuka, as proposed by the German Cabinet. Although the German commissioner was appointed in October, 1884, the English Government had difficulty in selecting its representative. The commissioners did not meet, therefore, until March, 1885. They concluded their labors by April 15. Four-fifths or more of the German land-claims had been allowed by the colonial authorities. It was only the rejected claims that were considered by the commissioners. Most of these Dr. Krauel himself recognized as unfounded. The aggregate sum was reduced from £140,000 to £10,620. For ten years before the cession of Fiji to Great Britain, European and American speculators obtained grants of land from the chiefs, for the most part without the concurrence of their tribes. The English authorities laid down the principle that land-titles acquired without the agreement of the tribesmen were void, and required purchasers to furnish proof that the grants were ratified by the natives. The awards of the commissioners followed this doctrine. Claims for interest were disallowed. The Fiji Land Commission appointed by the English colonial authorities had adjudicated in six years upon 1,327 cases, of which 517 were granted, 390 allowed partly, 361 disallowed, including 140 German claims, and the rest withdrawn. Only 15 claims of Germans were brought before the joint commission. The award was accepted by the German Government on May 16. The German commissioner was intrusted with two other tasks—that of working out a diplomatic arrangement with regard to the division of New Guinea (see PAPUA), and that of discussing with a representative of the English Government the general political relations of the two powers in the South Sea, and reaching a mutual understanding in regard to the labor question, the importation of liquor and fire-arms, the formalities to be observed in taking possession of new territories, etc. The British Government nominated Mr. J. B. Thurston, Colonial Secretary of Fiji, to confer with him on the latter subject, while the negotiations with reference to Papua were conducted with Sir Julian Paunceforte, Under-Secretary of the Foreign Office. An agreement was made between Great Britain and Germany whereby the subjects of both powers are prohibited from selling spirits, arms, or powder to the natives of the Pacific islands.

The Telegraph Conference.—An international conference of the states composing the General Telegraph Union met at Berlin in August. Dr. von Stephan, the German Postmaster-General, laid before the conference a scheme for a uniform international telegraph tariff for Europe. He proposed that every international message should pay twenty centimes a word in addition to a charge of fifty centimes, with a supplementary charge not to exceed ten centimes a word for telegrams forwarded by cable. Sir James Anderson made a suggestion to Dr. von Stephan to induce the governments of the world to join in purchasing the cables or guaranteeing their dividends, and thus control their tariff. There are twenty-six cable companies, owning 98,450 miles of cables, with an aggregate capital of $166,000,000. The conference, which came together Aug. 10, separated Sept. 17. Its decisions will go into operation July 1, 1886. Paris was selected for the next conference, to be held in 1890.

In the matter of telegraph codes it was agreed to reduce the number of letters in a code word from fifteen to ten, and to allow the words to be taken from any or all of the eight admitted languages, thus conforming to the regulations already established for cable messages. A proposition for international telegraphic money orders, to be charged for as ordinary telegrams, was approved. On the question of a uniform land tariff, all the states except Russia and Turkey agreed to uniform terminal rates of ten centimes for the large, and six and a half centimes for the minor states. Russia insisted on a special arrangement, on account of the extent of her territory, and was allowed to charge thirty centimes. Transit dues were agreed upon at the rates of eight centimes for large, four centimes for small countries, and twenty-four centimes for Russia. The effect of these changes is to reduce the cost of telegraphing between distant countries by about 40 per cent., a reduction that will affect the receipts of cable companies principally. The *grundtaxe*, or primary fixed charge for every telegram in addition to the rate per word, was abolished.

Conference on Shipping Law.—The Association for the Reform and Codification of the Law of Nations, through whose efforts the system of general average now in almost universal use was framed and adopted, held its twelfth conference at Hamburg in August. The chief purpose of the meeting was to settle upon a form for bills of lading that could be recommended for general adoption. The first of the rules of affreightment adopted provides that the ship-owner shall be responsible that his vessel is properly equipped, manned, provisioned, and fitted out. The next rule exempts him from responsibility for damages resulting from *vis major*, public enemies, civil commotions, pirates, robbers, fire, explosion, bursting of boilers, latent defects in hull or machinery. Goods delivered on the quay are considered as taken on board as far as the ship-owner's responsibility is concerned. In adjusting claims for short delivery the market price at the port of destination on the day of arrival is taken as the measure. No goods can be abandoned for freight, except liquids.

GRANT, ULYSSES S., eighteenth President of the United States, born at Point Pleasant, Clermont County, O., April 27, 1822; died on Mount McGregor, near Saratoga, N. Y., July 23, 1885. He was of Scotch ancestry, but his family had been American in all its branches for eight generations. He was a descendant of Mathew Grant, who arrived at Dorchester, Mass., in May, 1630. His father was Jesse R. Grant, and his mother Hannah Simpson. They were married in June, 1821, in Clermont County, O. Ulysses, the oldest of six children, spent his boyhood in assisting his father on the farm, a work more congenial to his tastes than working in the tannery of which his father was proprietor. He attended the village schools, and in the spring of 1839 was appointed to a cadetship in the Military Academy at West Point, by Hon. Thomas L. Hamer, M. C. The name given him at birth was Hiram Ulysses, but he was always called by his middle name. Mr. Hamer, thinking this his first name, and that his middle name was probably that of his mother's family, inserted in the official appointment the name of Ulysses S. The officials at West Point were notified by Cadet Grant of the error, but they did not feel authorized to correct it, and it was acquiesced in and became the name by which he was always known.

His Military Career. — As a student, Grant showed the greatest proficiency in mathematics, but he gained a fair standing in most of his studies. At cavalry-drill he proved himself the best horseman in his class. He was graduated in 1843, standing twenty-first in a class of thirty-nine. He was commissioned, on graduation, as a brevet second lieutenant, and was attached to the Fourth Infantry and assigned to duty at Jefferson Barracks, on the Mississippi, near St. Louis. In May, 1844, he accompanied his regiment to Camp Salubrity, in Louisiana. He was commissioned a second lieutenant in September, 1845. That month he went with his regiment to Corpus Christi, now in Texas, to join the army of occupation, under command of Gen. Zachary Taylor, upon the outbreak of the Mexican War.

He participated in the battle of Palo Alto, May 8, 1846; and in that of Resaca de la Palma, May 9, he commanded his company. On Aug. 19 he started with the army for Monterey, Mexico, which was reached on Sept. 19. He had been appointed regimental quartermaster of the Fourth Infantry, and was placed in charge of the wagons and pack-train on this march. During the assault of the 21st on Black Fort, one of the works protecting Monterey, instead of remaining in camp in charge of the quartermaster's stores, he charged with his regiment, on horseback, being almost the only officer in the regiment that was mounted in this assault. The adjutant was killed in the charge, and Lieut. Grant was designated to take his place. On the 23d, when the troops had gained a position in the city of Monterey, a volunteer was called for, to make his way to the rear under a heavy fire to order up ammunition, and Lieut. Grant volunteered, ran the gantlet in safety, and successfully accomplished the mission. Garland's brigade, to which the Fourth Infantry belonged, was transferred from Twiggs's to Worth's division, and ordered back to the mouth of the Rio Grande, where it embarked for Vera Cruz, to join the army under Gen. Scott. It landed near that city on March 9, 1847, and the investment was immediately begun. Lieut. Grant served with his regiment during the siege, until the capture of the place, March 29, 1847. On April 13 his division began its march from Vera Cruz toward the city of Mexico; and he participated in the battle of Cerro Gordo, April 17 and 18. The troops entered Pueblo on May 15, and Lieut. Grant was there ordered to take charge of a large train of wagons, with an escort of fewer than a thousand men, to obtain forage. He made a two days' march, and procured the necessary supplies. He participated in the capture of San Antonio and the battle of Churubusco, Aug. 20, and the battle of Molino del Rey, Sept. 8, 1847. In the latter engagement he was with the first troops that entered the Mills. Seeing some of the enemy on the top of a building, he took a few men, climbed to the roof, received the surrender of six officers, and occupied the position. For this service he was brevetted a first lieutenant. He was engaged in the storming of Chapultepec on Sept. 13, distinguished himself by conspicuous services, was highly commended in the reports of his superior officers, and was brevetted captain. While the troops were advancing against the city of Mexico on the 14th, observing a church from the top of which he believed the enemy could be dislodged from a defensive work, he called for volunteers, and, with twelve men of the Fourth Infantry, who were afterward joined by a detachment of artillery, he made a flank movement, gained the church, mounted a howitzer in the belfry, and used it with such effect that Gen. Worth sent for him and complimented him in person. He entered the city of Mexico with the army, Sept. 14, and a few days after was promoted to be first lieutenant. He remained with the army in the city of Mexico till the withdrawal of the troops in the summer of 1848, and then accompanied his regiment to Pascagoula, Miss. He there obtained leave of absence and went to St. Louis, where, on Aug. 22, 1848, he married Miss Julia T. Dent. He was soon afterward ordered to Sackett's Harbor, N. Y., and in April following to Detroit, Mich. In the spring of 1851 he was again transferred to Sackett's Harbor, and on July 5, 1852, he sailed from New York with his regiment for California *via* the Isthmus of Panama. While the troops were crossing the Isthmus, cholera broke out and carried off one seventh of the command. Lieut. Grant was left behind in charge of the sick, on Chagres river, and displayed great skill and devotion in caring for them, and supplying means of transportation. On arriving in California he spent a few weeks with his regiment at Benicia Barracks, and then accompanied it to Fort Vancouver, Oregon. Aug. 5, 1853, he was promoted to the captaincy of a company stationed at Humboldt Bay, Cal., and the next September he proceeded to that post.

He resigned his commission July 31, 1854, and went to live on a small farm near St. Louis. He was engaged in farming and in the real-estate business in St. Louis until May, 1860, when he removed to Galena, Ill., and there became a clerk in his father's hardware and leather store. When news was received of the breaking out of the civil war, a public meeting was called in Galena, and Capt. Grant was chosen to preside. He took a pronounced stand in favor of the Union cause and a vigorous prosecution of the war. A company of volunteers was raised, which he drilled and accompanied to Springfield, Ill. Gov. Yates of that State employed Capt. Grant in the Adjutant-General's department, and appointed him mustering officer. He offered his services to the General Government, in a letter written on May 24, 1861, but no answer was ever made to it. On June 17 he was appointed colonel of the Twenty-first Illinois Regiment of Infantry, which had been mustered in at Mattoon. The regiment was transferred to Springfield, and on July 3 he went with it from that place to Palmyra, Mo., thence to Salt River, where it performed the duty of guarding a portion of the Hannibal and St. Joseph Railroad, and from there to the town of Mexico, where Gen. Pope was stationed as commander of the military district. On July 31 Grant was assigned to the command of a sub-district under Gen. Pope, his troops consisting of three regiments of infantry and a section of artillery. He was appointed a brigadier-general of volunteers on Aug. 7, the commission being dated back to May 17, and was ordered to Ironton, Mo., to take command of a district in that part of the State, where he arrived Aug. 8. Ten days afterward he was ordered to St. Louis, and thence to Jefferson City. Eight days later he was directed to report in person at St. Louis, and on reaching there found that he had been assigned to the command of the District of Southeastern Missouri, embracing all the territory in Missouri south of St. Louis, and all southern Illinois, with permanent headquarters at Cairo. He established temporary headquarters at Cape Girardeau, on Mississippi river, to superintend the fitting out of an expedition against the Confederate Colonel Jeff. Thompson, and arrived at Cairo on Sept. 4. The next day he received information that the enemy was about to seize Paducah, Ky., at the mouth of Tennessee river, having already occupied Columbus and Hickman in that State. He moved that night with two regiments of infantry and one battery of artillery, and occupied Paducah the next morning. He issued a proclamation to the citizens, saying, "I have nothing to do with opinions, and shall deal only with armed rebellion and its aiders and abettors." Ken-

BIRTHPLACE OF ULYSSES S. GRANT, POINT PLEASANT, OHIO.
After an etching in Grant's "Memoirs," by permission.

tucky had declared an intention to remain neutral in the war, and this prompt occupation of Paducah prevented the Confederates from getting a foothold there, and did much toward retaining the State within the Union lines.

Gen. Sterling Price was advancing into Missouri with a Confederate force, and Grant was ordered, Nov. 1, to make a demonstration on both sides of the Mississippi, to prevent troops from being sent from Columbus and other points to re-enforce Price. On Nov. 6 Grant moved down the river with about 3,000 men on steamboats, accompanied by two gunboats, debarked a few men on the Kentucky side that night, and learned that troops of the enemy were being ferried across from Columbus to re-enforce those on the west side of the river. A Confederate camp was established opposite, at Belmont, and Grant decided to attack it. On the morning of the 7th he debarked his troops about three miles above the place, left a strong guard near the landing, and marched to the attack with about 2,500 men. A spirited engagement took place, in which Grant's horse was shot under him. The enemy was routed and his camp captured, but he soon rallied, and was re-enforced by detachments ferried across from Columbus, and Grant fell back and re-embarked. He got his men safely on the steamboats, and was himself the last one in the command who stepped aboard. He captured 175 prisoners and two guns, and spiked four other pieces, and lost 485 men. The Confederates lost 642. The opposing troops, including re-enforcements sent from Columbus, numbered about 7,000.

In January, 1862, he made a reconnoissance in force toward Columbus. He was struck with the advantage possessed by the enemy in holding Fort Henry on Tennessee river and Fort Donelson on the Cumberland, and conceived the idea of capturing them before they could be further strengthened, by means of an expedition composed of the troops under his command, assisted by the gunboats. He went to St. Louis and submitted his proposition to the department commander, Gen. Halleck, but was listened to with impatience, and his views were not approved. On Jan. 28 he telegraphed Halleck, renewing the suggestion, and saying, "If permitted, I could take and hold Fort Henry on the Tennessee." Com. Foote, commanding the gunboats, sent a similar dispatch. On the 29th Grant also wrote, urging the expedition. Assent was obtained on Feb. 1, and the expedition started the next day. Gen. Tilghman surrendered Fort Henry on the 6th, after a bombardment by the gunboats. He with his staff and ninety men was captured, but most of the garrison escaped and marched to join the troops in Fort Donelson, eleven miles distant, commanded by Gen. Floyd, who after this re-enforcement had a force of about 21,000 men. Grant at once prepared to invest Donelson, and on the 12th began the siege with a command numbering 15,000, which was increased on the 14th to 27,000; but about 5,000 of these were employed in guarding roads and captured places. His artillery consisted of only eight light batteries. The weather was extremely cold, the water high, much rain and snow fell, and the sufferings of the men were intense. The enemy's position was naturally strong, and had been well intrenched. There was heavy fighting on three successive days. On the 15th the enemy, fearing capture, made a desperate assault with the intention of cutting his way out. Grant detected the object of the movement, repelled the assault, and by a vigorous attack secured so commanding a position that the enemy saw further resistance would be useless. Floyd turned over the command to Pillow, who in turn resigned it to Buckner, and Floyd and Pillow escaped in the night on a steamboat. Over 3,000 infantry and the greater portion of Forrest's cavalry made their escape at the same time. On the 16th Buckner wrote proposing that commissioners be appointed to arrange for terms of capitulation. Grant replied: "No terms other than an unconditional and immediate surrender can be accepted. I propose to move immediately upon your works."

The garrison was surrendered the same day, unconditionally. The capture included 14,623 men, 65 cannon, and 17,600 small-arms. The killed and wounded numbered about 2,500. Grant's loss was 2,041 in killed, wounded, and missing. This was the first capture of a prominent strategic point since the war began, and indeed the only substantial victory thus far for the Union arms. It opened up two important navigable rivers, and left the enemy no strong foothold in Kentucky or Tennessee. Grant was soon afterward made a major-general of volunteers, his commission dating from Feb. 16, and his popularity throughout the country began from that day.

He urged a prompt following up of this victory, and started himself for Nashville, Feb. 28, without waiting for instructions, but telegraphing that he should start if he received no orders to the contrary. For this, and under the pretense that he had not forwarded to his superiors in command certain reports showing the strength and positions of his forces, he was deprived of his command, and ordered to remain at Fort Henry. He was not restored to command until March 13, when his services were again required in view of the enemy's having concentrated a large army near Corinth, Miss. He transferred his headquarters to Savannah, on Tennessee river, on the 17th. He found the forces under his command, numbering about 38,000 men, encamped on both sides of the river, and at once transferred them all to the west side and concentrated them in the vicinity of Pittsburgh Landing. He there selected a favorable position, and put his army in line, with the right resting at Shiloh Church, nearly three miles from the river. He was directed not to attack the enemy, but to await the arrival of Gen. Buell's army of 40,000 men, which was marching south through Tennessee to join Grant. On April 6 the Confederate army, numbering nearly 50,000 men, commanded by Gen. A. S. Johnston, made a vigorous attack at daylight, drove the national troops back in some confusion, and continued to press the advantage gained during the entire day. Gen. Johnston was killed about one o'clock, and the command of the Confederates devolved upon Gen. Beauregard; 5,000 of Grant's troops did not arrive on the field during the day, so that his command was outnumbered, and it required all his efforts to hold his position on the river until evening. Late in the afternoon the head of Buell's column crossed the river, but not in time to participate actively in the fighting, as the enemy's attacks had ceased. Grant sought shelter that night in a hut, but the surgeons had made an amputating hospital of it, and he found the sight so painful that he went out into the rain-storm which was raging and slept under a tree. He had given orders for an advance all along the lines the next morning. Buell's troops had now joined him, and the attack was pushed with such vigor that the enemy were steadily driven back and retreated nineteen miles to Corinth. On this day Grant's sword-scabbard was broken by a bullet. His total loss in the battle was 1,754 killed, 8,408 wounded, 2,885 missing; total, 13,047. The enemy acknowledged a loss of 1,728 killed, 8,012 wounded, and 957 missing; total, 10,699, but there are evidences that it was considerably greater. The national officers estimated the Confederate dead alone at 4,000.

On the 11th Gen. Halleck arrived at headquarters and took command in person. The forces consisted now of the right and left wings, center, and reserve, commanded respectively by Thomas, Pope, Buell, and McClernand, numbering in all nearly 120,000 men. The enemy was behind strong fortifications, and numbered over 50,000—estimates placed it at 70,000. Grant was named second in command of all the troops, but was especially intrusted with the right wing and reserve. On April 30 an advance was begun against Corinth, but the enemy evacuated the place and retreated, without fighting, on May 30. On June 21 Grant moved his headquarters to Memphis. Gen. Halleck was appointed general-in-chief of all the armies July 11. Grant returned to Corinth July 15, and on the 17th Halleck started for Washington, leaving Grant in command of the Army of the Tennessee; and on Oct. 25 he was assigned to the command of the Department of the Tennessee, including Cairo, Forts Henry and Donelson, northern Mississippi, and portions of Kentucky and Tennessee west of the Tennessee river. He ordered a movement against the enemy at Iuka to capture Price's force at that place, and a battle was fought on the 19th and 20th of September. The plan promised success, but the faults committed by the officer in immediate command of the troops engaged rendered it an incomplete victory, and permitted the enemy to escape. The Union loss was 736, that of the Confederates 1,438. Grant strengthened the position around Corinth, and remained there about eight weeks. When the enemy afterward attacked it, Oct. 3 and 4, they met with a severe repulse. Rosecrans was in immediate command of the national troops. On the 5th they were struck while in retreat and badly beaten in the battle of the Hatchie. The entire Union loss was 2,359. From the best sources of information, the Confederates lost nearly twice that number.

After the battle of Corinth, Grant proposed to Halleck, in the latter part of October, a movement looking to the capture of Vicksburg. On Nov. 3 he left Jackson, Tenn., and made a movement with 30,000 men against Grand Junction, and on the 4th he had seized this place and La Grange. The force opposing him was about equal to his own. On the 13th his cavalry occupied Holly Springs; on Dec. 1 he advanced against the enemy's works on the Tallahatchie, which were hastily evacuated, and on the 5th reached Oxford. On the 8th he ordered Sherman to move down the Mississippi from Memphis to attack Vicksburg, Grant's column to co-operate with him by land. On Dec. 20 the enemy captured Holly Springs, which had been made a secondary base of supplies, and seized a large amount of stores. Col. Murphy, who surrendered the post without having taken any proper measures of defense, was dismissed the service. The difficulties of protecting the long line of communication necessary for furnishing supplies, as well as other considerations, induced Grant to abandon the land expedition and take command in person of the movement down the Mississippi. Sherman had reached Milliken's Bend, on the west side of the river, twenty miles above Vicksburg, on the 24th, with about 32,000 men. He crossed the river, ascended the Yazoo to a point opposite Haines's Bluff, landed his forces, and made an assault upon the enemy's strongly fortified position at that place on the 29th, but was repelled with a loss of 175 killed, of 930 wounded, and 743 missing. The enemy reported 63 killed, 134 wounded, and 10 missing.

Grant's headquarters were established at Memphis on Jan. 10, and preparations were made for a concentrated movement against Vicksburg. On the 29th he arrived at Young's Point, opposite the mouth of the Yazoo, above Vicksburg, and took command in person of the operations against that city, his force numbering 50,000 men. Porter's co-operating fleet was composed of gunboats of all classes, carrying 280 guns and 800 men. Three plans suggested themselves for reaching the high ground behind Vicksburg, the only position from which it could be besieged: First, to march the army down the west bank of the river, cross over below Vicksburg, and co-operate with Banks, who was in command of an expedition ascending the river from New Orleans, with a view to capturing Port Hudson and opening up a line for supplies from below. The high water and the condition of the country made this plan impracticable at that time. Second, to construct a canal across the peninsula opposite Vicksburg, through which the fleet of gunboats and transports could pass, and which could be held open as a line of communication for supplies. This plan was favored at Washington, and was put into execution at once; but the high water broke the levees, drowned out the camps, and flooded the country, and after two months of laborious effort Grant reported it impracticable. Third, to turn the Mississippi from its course by opening a new channel *via* Lake Providence and through various bayous to Red river. A force was set to work to develop this plan, but the way was tortuous and choked with timber, and by March it was found impossible to open a practicable channel. In the mean time an expedition was sent to the east side of the river to open a route *via* Yazoo Pass, the Tallahatchie, the Yalabusha, and the Yazoo rivers; but insurmountable difficulties were encountered, and this attempt also had to be abandoned.

Grant, having thoroughly tested all the safer plans, now determined to try a bolder and more hazardous one, which he had long had in contemplation, but which the high water had precluded. This was to run the batteries with the gunboats and transports loaded with supplies, to march his troops down the west side of the river from Milliken's Bend to the vicinity of New Carthage, and there ferry them across to the east bank. The movement of the troops was begun on March 29. They were marched to New Carthage and Hard Times. On the night of April 16 the fleet ran the batteries under a terrific fire. April 29 the gunboats attacked the works at Grand Gulf, but made little impression, and that night ran the batteries to a point below. On April 30 the advance of the army was ferried across to Bruinsburg, below Grand Gulf and 30 miles south of Vicksburg, and marched out in the direction of Port Gibson. Everything was made subordinate to the celerity of the movement. The men had no supplies except such as they carried on their persons, Grant himself crossed the river with no personal baggage and without even a horse. He obtained a raggedly equipped horse on the east side, upon which he started out on the campaign.

Grant's advance encountered the enemy, under Gen. Bowen, numbering between 7,000 and 8,000, on May 1, near Port Gibson, routed him, and drove him in full retreat till nightfall. Grant's loss was 130 killed and 718 wounded. The Confederates reported their loss at 448 killed and wounded, and 384 missing; but it was somewhat larger, as Grant captured 650 prisoners. It was at Port Gibson that he learned of the success of Grierson, whom he had started from La Grange April 17, and who had moved south with 1,000 cavalry, torn up many miles of important railroads, destroyed large amounts of supplies, and arrived with but slight loss at Baton Rouge, La., May 2. On May 3 Grant entered Grand Gulf, which had been evacuated.

He was now opposed by two armies—one commanded by Pemberton at Vicksburg, numbering about 52,000 men; the other by Johnston, at Jackson, 50 miles east of Vicksburg, who was being rapidly re-enforced from points in the interior. Sherman had been ordered to make a demonstration against Haines's Bluff, to compel the enemy to detach troops for its defense and withhold them from Grant's front; and this feint was successfully executed April 30 and May 1, when Sherman received orders to retire and join the main army. Grant determined to move with celerity, place his force between the two armies of the enemy, and defeat them in detail before they could unite against him. He cut loose from his base, and ordered that the three days' rations issued to the men should be made to last five days. Sherman's command reached Grand Gulf on the 6th. On the 12th Grant's advance, near Raymond, encountered the enemy approaching from Jackson, and defeated him, and drove him from the field with a loss of 100 killed, 305 wounded, 415 prisoners, and 2 guns. Grant's loss was 66 killed, 339 wounded, and 37 missing. He pushed on to Jackson, and captured it on the 14th, with a loss of 42 killed, and 251 wounded and missing. The enemy lost 845 in killed, wounded, and missing, and 17 guns.

Grant now moved rapidly toward Vicksburg, and attacked Pemberton in a strong position at Champion Hill. After a hotly contested battle, the enemy was completely routed, with a loss of between 3,000 and 4,000 killed and wounded, 3,000 prisoners, and 30 guns; Grant's loss being 410 killed, 1,844 wounded, and 187 missing. The enemy made a stand at Big Black river bridge on the 17th, holding a strongly intrenched position; but a vigorous assault was made upon his line, the place was carried, and the enemy was driven across the river in great confusion, with the loss of many killed, 1,751 prisoners, and 18 guns. Grant's loss was but 39 killed, 237 wounded, and 3 missing. On the 18th the national army closed up against the outworks of Vicksburg, driving the enemy inside his fortifications. Sherman took possession of Haines's Bluff, a base for supplies was established at Chickasaw Landing, and on the 21st the army was once more supplied with full rations.

On the 19th and 22d, assaults were made upon the enemy's lines, but only a few outworks were carried, and on the 23d the siege was regularly begun. By June 30th there were 220 guns in position, all light field-pieces except six 32-pounders and a battery of heavy guns supplied by the navy. Grant now had a force of 71,000 men to conduct the siege and defend his position against Johnston's army threatening him in the rear. The operations were pressed day and night; there was mining and countermining; and the lines were pushed closer and closer, until the garrison abandoned all hope. On July 3 Pemberton asked for an armistice, and proposed the appointment of commissioners to arrange terms of capitulation. Grant replied that there would be no terms but unconditional surrender. The surrender was made on the 4th of July. Grant permitted the officers and men to be paroled, the officers to retain their private baggage and side-arms, and each mounted officer one horse. Grant showed every consideration to the vanquished, supplied them with full rations, and, when they marched out, issued an order saying, "Instruct the commands to be orderly and quiet as these prisoners pass, and to make no offensive remarks." The surrender included 31,600 prisoners, 172 cannon, 60,000 muskets, and a large amount of ammunition. Grant's total loss in the Vicksburg campaign was 8,873; that of the enemy nearly 60,000. Port Hudson now surrendered to Banks, and the Mississippi was opened from its source to its mouth. Grant was made a major-general in the regular army, and Congress, when it assembled, passed a resolution ordering a gold medal to be presented to him, and returning thanks to him and his army.

He soon recommended a movement against Mobile, but it was not approved. He went to New Orleans Aug. 30, to confer with Banks, and while there was severely injured by a fall of his horse. For nearly three months he was unable to walk unaided, but on the 16th of September started for Vicksburg, being carried aboard the steamboat. He received orders from Washington on the 27th to send all available forces to the vicinity of Chattanooga, to co-operate with Rosecrans. While personally superintending the carrying out of this order, he received instructions, Oct. 10, to report at Cairo. He arrived there on the 16th, and was directed to proceed to Louisville. At Indianapolis he was met by Mr. Stanton, Secretary of War, who accompanied him to Louisville and delivered an order to him placing him in command of the Military Division of the Mississippi, which was to embrace the Departments and Armies of the Tennessee, the Cumberland, and the Ohio. He at once proceeded to Chattanooga, arriving on the 23d, and took command there in person.

On Oct. 28 the battle of Lookout Valley was fought, and a much-needed line of communication for supplies was opened to the troops in and around Chattanooga, besieged by Bragg's army, which held a strongly fortified position. Thomas commanded the Army of the Cumberland, which held Chattanooga; Sherman, who had succeeded Grant in command of the Army of the Tennessee, was ordered to bring all his available troops to join Thomas; and Burnside, who was in Knoxville, in command of the Army of the Ohio, besieged by Longstreet's corps, was ordered to hold his position at all hazards till Bragg should be crushed and a force could be sent to the relief of Knoxville. Grant, having concentrated his troops near Chattanooga, made an assault upon the enemy's lines on the 23d, which resulted in carrying important positions. The attack was continued on the 24th and 25th, when the enemy's entire line was captured, and his army completely routed and driven out of Tennessee. Grant's forces consisted of 60,000 men; those of the Confederates, 45,000. The enemy's losses were reported at 361 killed and 2,180 wounded, but were undoubtedly greater. There were captured 6,442 men, 40 pieces of artillery, and 7,000 stands of small-arms. Grant's losses were 757 killed, 4,529 wounded, and 330 missing. On the 28th a force was dispatched to Knoxville, the command of the expedition being given to Sherman. On the 29th Longstreet assaulted Knoxville before the arrival of the troops sent for its relief, but was repelled by Burnside, and retreated. Grant visited Knoxville the last week in December, and went from there to Nashville, where he established his headquarters, Jan. 13, 1864.

He now ordered Sherman to march a force from Vicksburg into the interior to destroy the enemy's communications and supplies. It started on Feb. 3, went as far as Meridian, reaching there Feb. 14, and, after destroying railroads and great quantities of supplies, returned to Vicksburg. The grade of lieutenant-general was revived by act of Congress in February, and Grant was nominated for that office on March 1, and confirmed by the Senate on the 2d. He started from Nashville on the 4th, in obedience to an order calling him to Washington, arrived there on the 8th, and received his commission from the President on the 9th. He was assigned to the command of all the armies on the 12th (Sherman being given the command of the Military Division of the Mississippi on the 18th), and established his headquarters with the Army of the Potomac at Culpeper, Va., on the 26th.

Grant now determined to concentrate all the national forces into several distinct armies, which should move simultaneously against the opposing Confederate armies, operate vigorously and continuously, and prevent them from detaching forces to strengthen threatened points or for the purpose of making raids. He announced that the Confederate armies would be the only objective points in the coming campaigns. Sherman was to move toward Atlanta against Johnston. Banks's army, after it could be withdrawn from the Red river expedition, was to operate against Mobile. Sigel was to move down the Valley of Virginia against Breckinridge to destroy communications and supplies, and prevent raids from that quarter. Butler was to ascend the James river and threaten Richmond. The Army of the Potomac, re-enforced by Burnside's troops and commanded by Meade, was to cover Washington, and assume the offensive against Lee's army.

Orders were issued for a general movement of all the armies in the field on May 4. During the night of the 4th and 5th Grant crossed the Rapidan and encountered Lee in the Wilderness, where a desperate battle was fought on the 5th, 6th, and 7th. Grant's loss was 2,261 killed, 8,785 wounded, and 2,902 missing. Lee's losses have never been reported; but, as he was generally the attacking party, he probably lost more. He fell back on the 7th, and on that day and the next took up a strong defensive position at Spottsylvania. Grant moved forward on the night of the 7th. As he rode through the troops, the men greeted him as their new commander with an extraordinary demonstration in recognition of the victory, shouting, cheering, and kindling bonfires by the road-side as he passed. The 8th and 9th were spent by both armies in skirmishing and manœuvring for position. Sheridan's cavalry was started on the 9th to make a raid in rear of the enemy and threaten Richmond. On the 10th there was heavy fighting with no decisive results, and, on the 11th, skirmishing and reconnoitring. On the morning of this day Grant sent a letter to Washington containing the famous sentence, "I propose to fight it out on this line, if it takes all summer." On the 12th, a heavy assault was made on Lee's line, near the center, in which he lost nearly 4,000 prisoners and 30 guns. Violent storms now caused a cessation in the fighting for several days. On the 19th, Ewell's Corps, of Lee's army, moved around Grant's right flank and attacked, but was repelled after hard fighting. Grant's losses from the 8th to the 21st of May, around Spottsylvania, were 2,271 killed, 9,360 wounded, and 1,970 missing. The estimate of the enemy's loss, in killed and wounded, was nearly as great as that of the national army, besides about 4,000 prisoners and 30 cannon captured. In the mean time Butler had occupied Bermuda Hundred, below Richmond. Sherman had reached Dalton, Ga., and was steadily driving Johnston's army toward Atlanta. But Sigel had been forced to retreat before Breckinridge.

On the 21st Grant moved by the left flank to the North Anna river, where he again encountered Lee, and after several engagements moved again by the left from that position on the 27th toward Cold Harbor. Grant's losses between the 20th and 26th were 186 killed, 792 wounded, and 165 missing. Lee's losses during this period have never been fully ascertained. After much fighting by detached portions of the two armies, Grant made a general assault upon Lee's heavily intrenched position at Cold Harbor on June 3, but did not succeed in carrying it, being repelled with a loss of about 7,000 in killed, wounded, and missing, while Lee's loss was probably not more than 2,500. The campaign had now lasted thirty days. Grant had received during this time about 40,000 re-enforcements, and had lost 39,259 men — 6,586 killed, 26,047 wounded, and 6,626 missing. Lee had received about 30,000 re-enforcements. There are no official figures as to his exact losses, but they have been estimated at about equal to his re-enforcements.

Sherman had now reached Kenesaw, within about thirty miles of Atlanta; and on the 7th news arrived that Hunter, who had succeeded Sigel, had gained a victory over the forces opposing him, and had seized Staunton, on the Virginia Central Railroad. Grant made preparations for transferring the Army of the Potomac to the south side of James river, to operate against Petersburg and Richmond from a more advantageous position there. The army was withdrawn from the enemy's front on the night of June 12. The crossing of the river began on the 13th, and occupied three days.

A force had also been sent around by water, by the York and James rivers to City Point, to move against Petersburg. On the 15th the advanced troops attacked the works in front of that place; but night coming on, the successes gained were not followed up by the commanders, and the next morning the position had been re-enforced and strengthened. An assault was made on the afternoon of the 16th, which was followed up on the 17th and 18th, and the result was the capture of important outworks, and the possession of a line closer to Petersburg. Lee's army had arrived and again confronted the Army of the Potomac. Grant's headquarters had been established at City Point. On June 22 and 23 he made a movement from the left toward the Weldon Railroad, and heavy fighting took place, with but little result, except to render Lee's use of that line of communication more precarious. Sheridan had started on a raid from the Pamunkey river, June 7, and after defeating the enemy's cavalry, in the battle of Trevilian Station, destroying portions of the Virginia railroad, and inflicting other damage, he returned to White House, on York river, on the 20th. From there he crossed the James and rejoined the Army of the Potomac. A cavalry force under Wilson had also been sent to the south and west of Petersburg, which destroyed railroad property, and for a time seriously interrupted the enemy's communications *via* the Danville and South-side Railroads.

Hunter, in the Valley of Virginia, had destroyed the stores captured at Staunton and Lexington, and moved to Lynchburg. This place was re-enforced, and, after sharp fighting, Hunter fell back, pursued by a heavy force, to the Kanawha river. Early's army drove the national troops out of Martinsburg, crossed the upper Potomac, and moved upon Hagerstown and Frederick. There was great consternation in Washington, and Grant was harassed by many anxieties. On July 11 Early advanced against the fortifications on the north side of Washington; but Grant had sent the Sixth

Corps there, which arrived opportunely, and the enemy did not attack. Sherman had outflanked Johnston at Kenesaw, crossed the Chattahoochee on July 17, driven the enemy into his works around Atlanta, and destroyed a portion of the railroad in his rear.

In Burnside's front, before Petersburg, a large mine had been constructed beneath the enemy's works. Many of Lee's troops had been decoyed to the north side of the James by feints made upon the lines there. The mine was fired at daylight on the morning of July 30. A defective fuse caused a delay in the explosion, and when it occurred the assault ordered was badly executed by the officers in charge of it. Confusion arose, the place was re-enforced, and the national troops had to be withdrawn, after sustaining considerable loss. Grant, in his anxiety to correct the errors of his subordinates, dismounted and made his way to the extreme front, giving directions in person, and exposing himself to a most destructive fire.

Grant went to Monocacy Aug. 5, had Sheridan meet him there on the 6th, and placed him in command of all the forces concentrated in Maryland, with directions to operate against Early's command.

On Aug. 14 Hancock's corps was sent to the north side of the James, and made a demonstration against the enemy at Deep Bottom, to develop his strength and prevent him from detaching troops to send against Sheridan. This resulted in the capture of six pieces of artillery and a few prisoners. On Aug. 18 Warren's corps moved out and, after heavy fighting, seized and held a position on the Weldon Railroad. Fighting continued on the 19th, with Warren's force re-enforced by part of the Ninth Corps. Lee attempted to recover the Weldon road by an assault on tbe 21st, but was repelled. On the 23d Ream's Station was occupied by the national troops, and the enemy attacked them in this place in force. Two assaults were successfully met, but the place was finally captured, and the national troops were compelled to fall back.

Sherman's series of brilliant battles and manœuvres around Atlanta had forced the enemy to evacuate that place, and his troops entered the city on Sept. 2. Sheridan attacked Early's army, Sept. 19, and in the battle of Winchester completely routed him. He pursued the enemy to Fisher's Hill, and on the 22d gained another signal victory.

Grant now made several movements against Richmond and Petersburg, intended to keep Lee from detaching troops, to extend the national lines, and to take advantage of any weak spot in the enemy's front with a view to penetrate it. On Sept. 29 Butler's forces were ordered to make an advance upon the works at Deep Bottom. Fort Harrison, the strongest work north of the James, was captured, with 15 guns and several hundred prisoners. On the 30th the enemy made three attempts to retake it by assault, but was each time repelled with heavy loss. On the same day Meade moved out and carried two redoubts and a line of rifle-pits at Peebles's farm, two miles west of the Weldon Railroad. On Oct. 1 Meade's left was attacked; but it successfully repelled the assault, and he advanced his line on the 2d. Butler lost, in the engagements of the 29th and 30th, 394 killed, 1,554 wounded, and 324 missing. Meade lost, from Sept. 30 to Oct. 2, 151 killed, 510 wounded, and 1,348 missing. On Oct. 19 Sheridan's army was attacked by Early at Cedar Creek. Sheridan, who was on his return from Washington, rode 20 miles from Winchester, turned a defeat into a decisive victory, captured 24 guns, 1,600 prisoners, and 300 wagons, and left the enemy a complete wreck.

On Oct. 27 Butler was ordered to make a demonstration against the enemy's line in his front, and had some fighting. At the same time Meade moved out to Hatcher's run; but the enemy was found strongly intrenched, the ground very difficult, and no assault was attempted. In the afternoon a heavy attack was made by the enemy, but was successfully resisted. That night the national forces were withdrawn to their former positions. Meade's loss was 143 killed, 653 wounded, and 488 missing. The enemy's casualties were greater, as he lost in prisoners alone about 1,300 men. Butler lost on this day 700 in killed and wounded, and 400 prisoners.

Sherman destroyed the railroad in his rear, cut loose from his base, and started from Atlanta, Nov. 16, on his march to Savannah. Hood, instead of following him, turned north and moved his army against Thomas, who had been placed in command of the troops left for the defense of Tennessee. Thomas concentrated his forces in the vicinity of Nashville. Schofield was at Franklin, 25 miles from Nashville, with about 26,000 men. Hood attacked him on Nov. 30, but after a hotly contested battle was repelled with heavy loss. Thomas, with his entire army, attacked Hood, and in the battle of Nashville, Dec. 15 and 16, completely defeated the enemy, capturing 53 guns and 4,462 prisoners, and drove him south of the Tennessee river. Sherman reached the seacoast near Savannah on Dec. 13, after destroying about 200 miles of railroad and $100,000,000 worth of property. He invested Savannah, and forced the enemy to evacuate it on the night of Dec. 20. Grant had sent Butler in charge of an expedition against Fort Fisher, at the mouth of the Cape Fear river, to act in conjunction with the naval fleet under Admiral Porter. He sailed from Fort Monroe Dec. 14, landed his troops Dec. 25, and advanced against the fort, which had been vigorously shelled by the navy; but while the assaulting party had every prospect of entering the work, they received an order to fall back and re-embark. The expedition reached Fort Monroe on its return Dec. 27. Butler was relieved, and Ord was assigned to the command of the Army of the James. Grant fitted out another expedition against Fort Fisher, under Gen. A. H. Terry, which sailed from Fort Monroe on Jan. 6, 1865. On the 13th, the navy directed a heavy fire against the fort. Terry landed his troops, intrenched against a force of the enemy threatening him from the direction of Wilmington, and on the 15th made a vigorous assault, capturing the fort with its garrison and 169 heavy guns, and a large quantity of ammunition. It was at first thought best to transfer Sherman's army by sea to Virginia; but this plan was abandoned, and on Dec. 27 he was ordered to move north by land. His army numbered 60,000 men, and was accompanied by 68 guns and 2,500 wagons. On Jan. 7 Schofield was directed to bring his army, then at Clifton, Tenn., to the sea-coast. It reached Washington and Alexandria, Jan. 31, and on Feb. 9 arrived at the mouth of the Cape Fear river, with instructions to operate against Wilmington and penetrate the interior. He entered Wilmington on Feb. 22, it having been evacuated by the enemy, and took 51 heavy guns, 15 light guns, and 800 prisoners. His own loss in these operations was about 200 in killed and wounded. He moved from here to Goldsborough, where it was intended he should form a junction with Sherman.

On March 2 Lee addressed a letter to Grant, suggesting a personal meeting, with a view to arranging to submit subjects of controversy between the belligerents to a convention; but Grant replied that he had no authority to accede to the proposition; that he had a right to act only on subjects of a purely military character.

Sheridan moved down the Valley of Virginia, from Winchester, Feb. 27, and defeated Early at Waynesboro March 2, capturing and scattering nearly his entire command. He then turned eastward, destroyed many miles of the James river canal, passed around the north side of Richmond, and tore up the railroads, arrived at White House on the 19th, and from there joined the Army of the Potomac. Grant had been anxious for some time, lest Lee should suddenly abandon his works and fall back to unite with Johnston's forces in an attempt to crush Sherman and force Grant to pursue Lee to a point which would compel the Army of the Potomac to maintain a long line of communication with its base, as there would be nothing left in Virginia to subsist on after Lee had traversed it. Sleepless vigilance was enjoined on all commanders, with orders to report promptly any movement of Lee looking to a retreat. Sherman captured Columbia on Feb. 17, and destroyed large arsenals, railroad establishments, and 43 cannon. The enemy was compelled to evacuate Charleston. On March 3 Sherman struck Cheraw, and seized a large quantity of material of war, including 25 guns and 3,600 barrels of powder. At Fayetteville, on the 11th, he captured the finely equipped arsenal and 20 guns. On the 16th he struck the enemy at Averysboro, and after a stubborn fight drove him from his position, losing 554 men. The Confederates reported their loss at 500. On the 19th Johnston's army attacked a portion of Sherman's forces at Bentonville, and made six heavy assaults, which were all successfully met, and on the night of the 21st the enemy fell back. The national loss was 191 killed and 1,455 wounded and missing; that of the Confederates was reported at 223 killed, 1,467 wounded, 653 missing; but Sherman reports his captures of prisoners at 1,621. On the 23d Sherman reached Goldsboro, where Schofield had arrived two days before, and was again in communication with the sea-coast and able to draw supplies.

On March 20 Stoneman started to march eastward from East Tennessee, toward Lynchburg, and on the same day Canby moved against Mobile. Pope, who had succeeded Rosecrans in Missouri, was ordered to pursue Price and drive him beyond Red river. Hancock had been assigned to command the middle division when Sheridan joined the Army of the Potomac, and the troops under him near Washington were held in readiness to act as circumstances might dictate.

All was now in readiness for the spring campaign, which Grant intended should be the last. President Lincoln, between whom and Grant had sprung up a strong personal attachment, visited him at City Point on March 22, and Sherman came there on the 27th. They, with Grant and Admiral Porter, held an informal conference, and on the 28th Sherman set out again to join his army. At daylight, on March 25th, Lee had made a determined assault on Grant's right, capturing Fort Steadman, breaking through the national lines, and gaining possession of several batteries. In a few hours he was driven back and all the captured positions were regained. Lee took this step to endeavor to force the withdrawal of troops in front of his right, and enable him to leave his intrenchments and retreat toward Danville. Its failure prevented the attempt. The country roads being considered sufficiently dry, Grant had issued orders for a general advance on the 29th, and these were carried out at the appointed time. Sheridan, with his cavalry, was sent in advance to Dinwiddie Court-House. The Fifth Corps had some fighting on the 29th, and in moving forward on the 31st was attacked and driven back a mile. Supported by a part of the Second Corps, it made a counter-attack, drove the enemy back into his breastworks, and secured an advanced position. Sheridan had pushed on to Five Forks, but his command encountered a strong force of infantry and cavalry, and after heavy fighting all day he fell back to Dinwiddie Court-House, where he repelled the repeated assaults made upon him and held the place. The Fifth Corps was that night ordered to report to Sheridan. The enemy, on the morning of April

1, fell back toward Five Forks, closely followed by the cavalry, which pressed him closely. In the afternoon he had taken up a strongly intrenched position at Five Forks, on Lee's extreme right. The Fifth Corps having joined Sheridan, he made a combined attack, with infantry and cavalry, and by nightfall had gained a brilliant victory, capturing the Confederate works, 6 guns, and nearly 6,000 prisoners. His cavalry pursued the broken and flying enemy for six miles beyond the field of battle.

That night, after getting the full details of Sheridan's success, Grant determined to make a vigorous assault the next day, with all his troops, upon the lines around Petersburg. It began at daylight, April 2; the works were carried, and in a few hours Grant was closing in upon the inner defenses of the city. Two of the forts, Gregg and Whitworth, were secured in the afternoon. The former was captured by assault, the latter was evacuated; 12,000 prisoners and over fifty guns were already in Grant's hands. Richmond and Petersburg were evacuated that night, and the national forces entered and took possession on the morning of the 3d. Grant, anticipating this, had begun a movement west during the night, to head off Lee from Danville, and a vigorous pursuit by the whole army was ordered. It became evident that Lee was moving toward Amelia Court-House, and a force was urged forward to Jetersville, on the Danville Railroad, to get between him and Danville. Part of Sheridan's cavalry and the head of the Fifth Corps reached there on the afternoon of the 4th and intrenched. The Army of the Potomac arrived by forced marches on the 5th, while the Army of the James, under Ord, pushed on toward Burkesville. An attack was ordered upon Lee on the morning of the 6th, but he had left Amelia Court-House during the night, and was pushing on toward Farmville by the Deatonsville road. He was closely pursued, and on the afternoon of the 6th, Sheridan, with his cavalry and the Sixth Corps, attacked him at Sailor's Creek, capturing seven general officers, about 7,000 men, and 14 guns. The Second Corps had kept up a running fight with the enemy all day, and had captured four guns, 1,700 prisoners, thirteen flags, and 300 wagons. Lee was continuing his retreat through Farmville, and Grant urged troops to that place by forced marches on the 7th. The Second Corps and a portion of the cavalry had been repelled in their attacks on Lee, north of the Appomattox, and the Sixth Corps crossed from Farmville on the evening of the 7th to re-enforce them. That night Grant sent a note from Farmville to Lee, calling his attention to the hopelessness of further resistance, and asking the surrender of his army. He received a reply from Lee on the morning of the 8th, saying he was not entirely of Grant's opinion as to the hopelessness of further resistance, but asking what terms would be offered. Grant, who was still at Farmville, immediately replied, saying that as peace was his great desire, he would insist on but one condition, that the men and officers surrendered should be disqualified from taking up arms again until properly exchanged. On the 8th Lee's troops were in full retreat on the north side of the Appomattox. The Second and Sixth Corps followed in hot pursuit on that side, while Sheridan, Ord, and the Fifth Corps were pushed forward with all speed on the south side to head off Lee from Lynchburg. Near midnight on the night of the 8th Grant received another note from Lee, saying he had not intended to propose the surrender of his army, but desired to know whether Grant's proposals would lead to peace, and suggested a meeting at 10 A. M. the next morning. Grant replied that such a meeting could lead to no good, as he had no authority to treat on the subject of peace, but suggested that the South's laying down their arms would hasten the event, and save thousands of lives and hundreds of millions of property. Early on the morning of April 9 Lee's advance arrived at Appomattox Court-House; but by extraordinary forced marches, Sheridan, Ord, and Griffin reached that place at the same time. Lee attacked the cavalry; but, when he found infantry in his front, he sent in a flag of truce, and forwarded a note to Grant, asking an interview in accordance with the offer contained in Grant's letter of the day before. Grant received it on the road while riding toward Appomattox Court-House, and sent a reply saying he would move forward and meet Lee at any place he might select. They met in a house in Appomattox, on the afternoon of the 9th, and the terms of surrender were drawn up by Grant and accepted by Lee. The conference lasted about three hours. The men and officers were paroled and allowed to return to their homes; all public property was to be turned over, but the officers were allowed to keep their side-arms, and both officers and men to retain their private horses and baggage. These terms were so magnanimous, and the treatment of Lee and his officers so considerate, that the effect was to induce other Confederates to seek the same terms and bring the rebellion to a speedy close. In riding to his camp after the surrender, Grant heard the firing of salutes. He sent at once to suppress them, and said: "The war is over; the rebels are again our countrymen, and the best sign of rejoicing after the victory will be to abstain from all demonstrations in the field." The number paroled was 28,356. In addition to these, 19,132 had been captured during the campaign since March 29. The killed were estimated at 5,000. After April 9th over 20,000 stragglers and deserters besides came in and surrendered. The national losses during this period were 2,000 killed, 6,500 wounded, and 2,500 missing.

Grant's losses, including those of Butler's army, during the year beginning with the battle of the Wilderness, were 12,663 killed, 49,-

559 wounded, and 20,498 missing; total 82,720. No accurate reports of the Confederate losses can be obtained; but Grant's captures in battle during this year were 66,512.

On April 10 Grant started for Washington to hasten the disbanding of the armies, stop purchases of supplies, and save expense to the Government. He did not stop to visit Richmond. President Lincoln was assassinated on the 14th, and Grant would probably have shared the same fate but for his having left Washington that day. On April 18 Sherman received the surrender of Johnston's army, but on terms that the Government did not approve, and Grant was sent to North Carolina to conduct further negotiations. On the 26th Johnston surrendered to Sherman on terms similar to those given to Lee, and 31,243 men were paroled. Grant remained at Raleigh and avoided being present at the interview, leaving to Sherman the full credit of the capture.

Canby's force appeared before Mobile on March 27, the principal defensive works were captured on April 9, and Mobile was evacuated on the 11th, when 200 guns and 4,000 prisoners were captured, but about 9,000 of the garrison escaped. Wilson's cavalry command captured Selma, Ala., on the 2d of April, and Tuscaloosa on the 4th, occupied Montgomery on the 14th, and took West Point and Columbus, Ga., on the 16th. Macon surrendered on the 21st. Kirby Smith surrendered his command, west of the Mississippi, on the 26th. There was then not an armed enemy left in the country, and the rebellion was ended. Grant established his headquarters in Washington. He was greeted with ovations wherever he went, honors were heaped upon him in every part of the land, and he was universally hailed as the country's deliverer.

In June, July, and August, 1865, Grant made a tour through the Northern States and Canada. His receptions were marked by unprecedented enthusiasm; civic bodies, military organizations, and individuals vying with each other in according honors to him. In November he was welcomed in New York by a demonstration that exceeded all previous efforts. It consisted of a banquet and reception, and the manifestations of the people in their greetings knew no bounds.

Immediately after the war, Grant sent Gen. Sheridan with an army corps to the Rio Grande river to observe the movements of the French, who were then in Mexico supporting the Imperial Government there in violation of the Monroe doctrine. This demonstration was the chief cause of the withdrawal of the French. Maximilian, being left without assistance from a European power, was soon driven from his throne, and the Republic of Mexico was reestablished.

The United States Court in Virginia had found indictments against Lee and other officers prominent in the rebellion, and much anxiety was manifested by them on this account. Two months after the war, Lee applied by letter to be permitted to enjoy privileges extended to those included in a proclamation of amnesty, which had been issued by the President. Grant put an indorsement on the letter, which began as follows: "Respectfully forwarded through the Secretary of War to the President, with the earnest recommendation that the application of Gen. Robert E. Lee for amnesty and pardon be granted him." But President Johnson was at that time greatly embittered against all participants in the rebellion, and seemed determined to have Lee and others punished for the crime of treason. Lee afterward made a strong appeal by letter to Grant for protection. Grant put a long and emphatic indorsement upon this letter, in which he used the following language: "In my opinion, the officers and men paroled at Appomattox Court-House and since upon the same terms given to Lee, can not be tried for treason so long as they preserve the terms of their parole. . . . The action of Judge Underwood in Norfolk has already had an injurious effect, and I would ask that he be ordered to quash all indictments found against paroled prisoners of war, and to desist from further prosecution of them." Grant insisted that he had the power to accord the terms he granted at Appomattox, and that the President was bound to respect the agreements there entered into unless they should be abrogated by the prisoners violating their paroles. He went so far as to declare that he would resign his commission if so gross a breach of good faith should be perpetrated by the Executive. The result was the abandonment of the prosecutions. This was the first of a series of contests between Grant and the President, which finally resulted in their entire estrangement.

In December Grant made a tour of inspection through the South. His report upon affairs in that section of the country was submitted to Congress by the President, and became the basis of important reconstruction laws.

In May, 1866, he wrote a letter to the Secretary of War, which was submitted to Congress, and became the basis for the reorganization of the army, and also for the distribution of troops through the South during the process of reconstruction.

The Fenians were now giving the Government much trouble, and, in consequence of their acts, the relations between the United States and Great Britain were becoming strained. They had organized a raid into Canada, to take place during the summer; but Grant visited Buffalo in June, took effective measures to stop them, and prevented all further unlawful acts on their part. Congress had passed an act creating the grade of general, a higher rank than had before existed in the army, to be conferred on Grant as a reward for his illustrious services in the field, and on July 25, 1866, he received his commission.

President Johnson, having changed his policy toward the South, finding that Grant refused to support him in his intentions to assume powers which Grant believed were vested only in Congress, ordered him out of the country, with directions to proceed on a special mission to Mexico. Grant refused, and an effort was afterward made to send him West, to prevent his presence in Washington. The Thirty-ninth Congress, fearing the result of this action on the part of the President, attached a clause to the Army Appropriation Bill, passed on March 4, 1867, providing that "all orders and instructions relating to military operations shall be issued through the General of the Army," and added that he should "not be removed, suspended, or relieved from command or assigned to duty elsewhere than at the headquarters in Washington, except at his own request, without the previous approval of the Senate." The President signed the bill, with a protest against this clause, and soon obtained an opinion from his Attorney-General that it was unconstitutional. The President then undertook to send this opinion to the district commanders, but finding the Secretary of War in opposition, he issued it through the Adjutant-General's office. Gen. Sheridan, then at New Orleans, in command of the Fifth Military District, inquired what to do, and Grant replied that a "legal opinion was not entitled to the force of an order," and "to enforce his own construction of the law until otherwise ordered." This brought on a crisis. The President claimed that under the Constitution he could direct the district commanders to issue such orders as he dictated, and was met by an act of Congress, passed in July, making the orders of the district commanders "subject to the disapproval of the General of the Army." Thus Grant was given chief control of affairs relating to the reconstruction of the Southern States.

The President still retained the power of removal, and on the adjournment of Congress he removed Sheridan and placed Gen. Hancock in command of the Fifth Military District. Some of Hancock's orders were revoked by Grant, which caused some bitterness of feeling between these officers, and provoked considerable opposition from the Democratic party. Subsequently, when a bill was before Congress to muster Gen. Hancock out of the service for his acts in Louisiana, Grant opposed it and it was defeated. Soon afterward he recommended Hancock for promotion to the grade of major-general in the regular army, to which he was appointed.

The "Tenure-of-Office" Act forbade the President from removing a Cabinet officer without the consent of the Senate; but President Johnson suspended Stanton, and appointed Grant Secretary of War *ad interim*, on the 12th of August, 1867. Grant protested against this action, but retained the office until the 14th of January, 1868, when the Senate refused to confirm the suspension of Stanton. Grant immediately notified the President, who, finding that the General of the Army would not retain the office in opposition to the will of Congress, appointed Gen. L. Thomas to succeed him, and ordered Grant verbally to disregard Stanton's orders. This led to quite an acrimonious correspondence. The President claimed that Grant had promised to sustain him. This Grant emphatically denied, and in a long letter reviewing his action said: "The course you would have it understood I agreed to pursue was in violation of law and was without orders from you, while the course I did pursue, and which I never doubted you understood, was in accordance with law. . . . And now, Mr. President, when my honor as a soldier and integrity as a man have been so violently assailed, pardon me for saying that I regard this whole matter, from the beginning to the end, as an attempt to involve me in the resistance of law for which you hesitate to assume the responsibility in orders."

Grant's course since the war had served to increase his popularity still further, and when the Republican Convention met in Chicago, May 20, 1868, he was unanimously nominated for the presidency on the first ballot. In his letter of acceptance, dated nine days after, he made use of the famous phrase, "Let us have peace." The Democratic party nominated Horatio Seymour, of New York. When the election occurred, out of the 294 electoral votes cast for President, Grant received 214 and Seymour 80—Mississippi, Texas, and Virginia not voting. On the 4th of March, 1869, Grant was inaugurated the eighteenth President of the United States. In his inaugural address he declared that the Government bonds should be paid in gold, advocated a speedy return to specie payments, and made many important recommendations regarding public affairs.

Grant possessed in a striking degree the essential characteristics of a successful soldier. His self-reliance was one of his most pronounced traits, and enabled him at critical moments to decide promptly the most important questions without useless delay in seeking advice from others, and to assume the gravest responsibilities without asking any one to share them. He had a fertility of resource and a faculty of adapting the means at hand to the accomplishment of his purposes, which contributed no small share to his success. His moral and physical courage were equal to every emergency in which he was placed. His unassuming manner, purity of character, and absolute loyalty to his superiors and to the work in which he was engaged, inspired loyalty in others and gained him the devotion of the humblest of his subordinates. He was singularly calm and patient under all circumstances, was never unduly elated by victory or depressed by defeat, never became excited, and never uttered an oath or imprecation. His habits of life were simple, and he was possessed of a physical constitution that enabled him to endure every form of fatigue and privation incident to military service in the field. He had an intuitive knowledge of topography, and never became confused as to locality in directing the movements of large bodies of men. He exhibited a rapidity of thought and action on the field that enabled him to move troops in the presence of an enemy with a promptness that has rarely been equaled. He had no hobby as to the use of any particular arm of the service. He naturally placed his main reliance on his infantry, but made a more vigorous use of cavalry than any of the generals of his day, and was judicious in apportioning the amount of his artillery to the character of the country in which he was operating. While his achievements in actual battle eclipse by their brilliance the strategy and grand tactics employed in his campaigns, yet the extraordinary combinations effected and the skill and boldness exhibited in moving large armies into position entitle him, perhaps, to as much credit as the qualities he displayed in the face of the enemy.

His Civil Career.—Gen. Grant's father was a Whig, and an admirer of Mr. Clay, whose public policy embraced three great measures: First, a national bank, or a fiscal agency as an aid to the Treasury in the collection and disbursement of the public revenues; secondly, a system of internal improvements to be created at the public expense and controlled by the national Government; and, thirdly, a tariff system that should protect the American laborer against the active competition of the laborers of other countries who were compelled to work for smaller compensation. From 1834 to 1846 the country was engaged in controversy over the policy of the Whig party, of which Mr. Clay was then the recognized head. Indeed, the controversy began as early as the year 1824, and it contributed, more than all other causes, to the new organization of parties under the leadership, of Clay and Jackson. Gen. Grant was educated under these influences, and in the belief that the policy of the Whig party would best promote the prosperity of the country. Those early impressions ripened into opinions, which he held and on which he acted during his public life. It happened by the force of circumstances that the Republican party was compelled to adopt the policy of Mr. Clay—not in measures, but in the ideas on which his policy was based. It is not now necessary to inquire whether the weight of argument was with Mr. Clay or with his opponents. The war made inevitable the adoption of a policy that Mr. Clay had advocated as expedient and wise.

The Pacific Railways were built by the aid of the Government and under the pressure of a general public opinion that the East must be brought into a more intimate connection with our large possessions on the Pacific Ocean, for mutual support and for the common defense. The national banking system was established for the purpose of securing the aid of the banks as purchasers and negotiators of the bonds of the Government, at a time when the public credit was so impaired that it seemed impossible to command the funds necessary for the prosecution of the war. The same exigency compelled Congress to enact, and the country to accept, a tariff system more protective than any suggested by Mr. Clay. The necessities of the times compelled free-traders, even, to accept the revenue system with its protective features; but Gen. Grant accepted it as a system in harmony alike with his early impressions and with his matured opinions. It has happened, by the force of events, that the policy of the old Whig party has been revived in the national banking system, while the Independent Treasury, the leading measure of the old Democratic party, has been preserved in all its features as the guide of the Treasury Department in its financial operations.

When Gen. Grant became President, these three measures had been incorporated into the policy of the Republican party. Their full acceptance by him did not require any change of opinion on his part. It was true that he had voted for Mr. Buchanan in 1856; but his vote was given in obedience to an impression that he had received touching the qualifications of Gen. Fremont. The fact that he had voted for Mr. Buchanan excited suspicion in the minds of some Republicans, and it engendered hopes in the bosoms of some Democrats that he might act in harmony with their party. The suspicions and the hopes were alike groundless. As early as August, 1863, in a letter to Mr. E. B. Washburne, he said: "It became patent to my mind early in the rebellion that the North and South could never live at peace with each other except as one nation, and that without slavery. As anxious as I am to see peace established, I would not, therefore, be willing to see any settlement until this question is forever settled."

Thus was Gen. Grant, at an early moment, and upon his own judgment, brought into full accord with the Republican party upon the two debatable and most earnestly debated questions during Mr. Lincoln's administration—prosecution of the war and abolition of slavery. Upon this basis of his early impressions and matured opinions his administrative policy was constructed. And thus is it apparent that in 1868 he was in a condition, as to all matters of opinion, to accept a nomination at the hands of the Republican party; and it is equally apparent that he was separated from the Democratic party by a chasm wide, deep, and impassable. It is, however, true that Gen. Grant's feelings were not intense, and in the expression of his opinions his tone was mild and his manner gentle. It often happened, also, that he did not undertake to controvert opinions and expressions with which he had no sympathy.

This peculiarity may at times have led to a misunderstanding, or to a misinterpretation of his views.

① When he became President, there was a body of American citizens, not inconsiderable in numbers, who doubted the ability of the Government to pay the war debt; there were others who advocated payment in greenbacks, or the substitution of a note not bearing interest for a bond that bore interest; and there were yet others who denied the validity of the existing obligations. All these classes, whether they were dishonest or only misled, were alike rebuked in his inaugural address. These were his words: "A great debt has been contracted in securing to us and to our posterity the Union. The payment of this debt, principal and interest, as well as the return to a specie basis, as soon as it can be accomplished without material detriment to the debtor class, or to the country at large, must be provided for. . . . To protect the national honor, every dollar of government indebtedness should be paid in gold, unless otherwise expressly stipulated in the contract. . . . Let it be understood that no repudiator of one farthing of our public debt will be trusted in public place, and it will go far toward strengthening a credit which ought to be the best in the world, and will ultimately enable us to replace the debt with bonds bearing less interest than we now pay."

In the same address he asserted the ability of the country to pay the debt within the period of twenty-five years, and he also declared his purpose to secure a faithful collection of the public revenues. At the close of his administration of eight years one fifth part of the public debt had been paid, and if the system of taxation that existed in 1869 had been continued the debt would be extinguished in less than a quarter of a century from the year 1869. In his administration, however, the crisis was passed. The ability and the disposition of the country were made so conspicuous that all honest doubts were removed, and the class of repudiators was shamed into silence. The redemption of the debt by the purchase of bonds in the open market strengthened the public credit, and laid a foundation for the resumption of specie payments.

Gen. Grant's inaugural address was followed by the passage of the act of March 18, 1869, entitled "An act to strengthen the public credit." This act was a pledge to the world that the debts of the United States would be paid in coin, unless there were in the obligations express stipulations to the contrary.

In accordance with the report of the Secretary of the Treasury, President Grant, in his annual message of December, 1869, recommended the passage of an act authorizing the funding of the public debt at a lower rate of interest. Following this recommendation, the bill for refunding the public debt, prepared by the Secretary of the Treasury, was enacted and approved July 14, 1870. By this act the Secretary of the Treasury was authorized to issue bonds to the amount of $200,000,000 bearing interest at the rate of 5 per cent., $300,000,000 bearing interest at the rate of 4½ per cent., and $1,000,000,000 bearing interest at the rate of 4 per cent.

Under this act, and the amendments thereto, the debt has been refunded from time to time until the average rate of interest does not now exceed 3½ per cent. Although these two important measures of administration were not prepared by Gen. Grant, they were but the execution of the policy set forth in his inaugural address. ②

President Grant's Indian policy was due to his natural love of justice and to his experience as a soldier among the Indians previous to his resignation from the army. Its object, as set forth in his inaugural address, was the civilization of the Indians and their ultimate citizenship. In his first annual message he spoke of the management of the Indians, and alleged that it had been "attended with continuous robberies, murders, and wars." Again he said, "From my own experience upon the frontiers and in Indian countries, I do not hold either legislation, or the conduct of the whites who come most in contact with the Indians, blameless for these hostilities." Under the influence of these opinions he opposed the transfer of the Indian Bureau from the Interior to the War Department, and under the influence of the same opinions he accepted as Indian agents the representatives of the various religious societies of the country. The new system was not always successful in its application because of the agents so appointed. Some of them succeeded, while others failed. The immediate practical results on the frontier were neither the best nor the final test of the wisdom of the new policy. The views entertained by President Grant, and announced officially to the country, have created a public interest in the condition and fate of the Indian race, and a policy of humanity and justice has taken the place of brute force. In the long line of Presidents there is no one to whom the Indian race is as much indebted as to Gen. Grant.

③ In respect to the rights of the negro race, Gen. Grant must be ranked with the advanced portion of the Republican party. Upon the capture of Fort Donelson a number of slaves fell into the hands of the Union army. Gen. Grant issued an order, dated Feb. 26, 1862, in which he authorized their employment for the benefit of the Government, and at the close he declared that under no circumstances would he permit their return to their masters. In his first inaugural address he urged the States to ratify the fifteenth amendment, and its ratification was due largely to his advice. At that moment his influence was very great. It may well be doubted whether any other President ever enjoyed to as high a degree the confidence of the country. He gave to that measure the weight of his opinion and the official influence of his administration. The amendment was opposed by the Democratic party, generally, and a considerable body of Republicans questioned its wisdom. Gen. Grant was responsible for the ratification of the amendment. Had he advised its rejection, or had he been indifferent to its fate, the amendment would have failed, and the country would have been left to a succession of bitter controversies arising from the application of the second section of the fourteenth amendment, in those States that should deny the elective franchise to any portion of the male citizens over twenty-one years of age, except for the causes specified in said section.

④ Gen. Grant accepted the plan of Congress in regard to the reconstruction of the Union. There were three opinions that had obtained a lodgment in the public mind. President Johnson and his supporters claimed that the President held the power by virtue of his office to convene the people of the respective States, and that under his direction constitutions might be framed, and Senators and Representatives might be chosen who would be entitled to seats in Congress as though they represented States that had not been engaged in secession and war. Others maintained that neither by the ordinances of secession nor by the war had the States of the Confederacy been disturbed in their legal relations to the Union. It was the theory of the Republican party in Congress that the eleven States by their own acts had destroyed their legal relations to the Union; that the jurisdiction of the national Government over the territory of the seceding States was full and complete; and that, as a result of the war, the national Government could hold them in a territorial condition and subject to military rule. Upon this theory the reappearance of a seceded State as a member of the Union was made to depend upon the assent of Congress, with the approval of the President, or upon an act of Congress by a vote of two thirds over a presidential veto.

⑤ Gen. Grant sustained the policy of Congress during the long and bitter contest with President Johnson, and when he became President he accepted that policy without reserve in the case of the restoration of the States of Virginia, Georgia, Texas, and Mississippi. Upon this statement it appears that Gen. Grant was a Republican, and that he became a Republican by processes that preclude the suggestion that his nomination for the presidency wrought any change in his position upon questions of principle or policy in the affairs of Government. ⑥ Indeed, his nomination in 1868 was distasteful to him, as he then preferred to remain at the head of the army. It was in the nature of things, however, that he should have wished for a re-election. He was re-elected, and at the end of his second term he accepted a return to private life as a relief from the cares and duties of office. The support which he received for the nomination in 1880 was not due to any effort on his part. Not even to his warmest supporters did he express a wish, or dictate or advise an act. His only utterance was a message to four of his friends at the Chicago Convention, that whatever they might do in the premises would be acceptable to him. His political career was marked by the same abstention from personal effort for personal advancement that distinguished him as an officer of the army. But he did not bring into civil affairs the habits of command that were the necessity of military life. Although by virtue of his position he was the recognized head of the Republican party, he made no effort to control its action. Wherever he placed power, there he reposed trust. There was not in Gen. Grant's nature any element of suspicion, and his confidence in his friends was free and full. Hence it happened that he had many occasions for regret. Against Gen. Grant there were frequent charges and insinuations of wrong-doing, but in this generation there has been no man in public life who was freer from all occasion for such insinuations and charges. When he heard that the Treasury Department was purchasing bullion of a company in which he was a stockholder, he sold his shares without delay, and without reference to the market price or to their real value.

On the Thursday preceding Black Friday the speculators in gold had carried the price so high that the business of the custom-houses was paralyzed. That afternoon I called upon the President, and, after informing him of the state of the gold market and its effect upon the customs receipts, I said, "I propose to sell gold to-morrow and end the trouble." Said the President, "How much will you need to sell?" I replied, "Three million will be sufficient." "You had better advertise five million and not make a failure," said he. Without then deciding the point, I offered four million, which proved quite adequate.

Gen. Grant had no disposition to usurp power. He had no policy to impose upon the country against the popular will. This was shown in the treatment of the Santo Domingo question. Gen. Grant was not indisposed to see the territory of the republic extended, but his love of justice and fair dealing was such that he would have used only honorable means in his intercourse with other nations. Santo Domingo was a free offering, and he thought that its possession would be advantageous to the country. Yet he never made it an issue, even in his Cabinet; where, as he well knew, very serious doubts existed as to the expediency of the measure. He was deeply pained by the unjust attacks and groundless criticisms of which he was the subject, but he accepted the adverse judgment of the Senate as a constitutional binding decision of the question, and of that decision he never complained.

In a message to the Senate of the 31st of May, 1870, he urged the annexation of Santo Domingo. He said, "I feel an unusual anxiety for the ratification of this treaty, because I believe it will redound greatly to the glory of the two countries interested, to civilization, and to the extirpation of the institution of slavery." He claimed for the scheme great commercial advantages. He claimed also that it was in harmony with the Monroe doctrine, and that the consummation of the measure would be notice to the states of Europe that no acquisition of territory on this continent would be permitted. In his second inaugural address Gen. Grant referred to the subject in these words: "In the first year of the past administration the proposition came up for the admission of Santo Domingo as a Territory of the Union. . . . I believe now, as I did then, that it was for the best interests of this country, for the people of Santo Domingo, and all concerned, that the proposition should be received favorably. It was, however, rejected constitutionally, and therefore the subject was never brought up again by me." Gen. Grant considered the failure of the treaty as a national misfortune, but he never criticised the action of the Senate.

Gen. Grant's firmness was shown in his veto of the Senate currency bill of 1874. It is known that unusual efforts were made to convince him that the measure was wise in a financial view, and highly expedient upon political grounds. The President wrote a message in explanation of his act of approval, but upon its completion he was so much dissatisfied with his own argument that he resolved to veto the bill. Hence the veto message of April 22, 1874.

In foreign policy, the principal measure of Gen. Grant's administration was the treaty with Great Britain of May, 1871. The specific and leading purpose of the negotiations was the adjustment of the claim made by the United States that Great Britain was liable in damages for the destruction of American vessels, and the consequent loss of commercial power and prestige, by the depredations of Confederate cruisers that were fitted out or had obtained supplies in British ports. Neither by the treaty of peace of 1783, nor by the subsequent treaties with Great Britain, had a full and final settlement of the fishery question or of our northern boundary-line at its junction with the Pacific Ocean been made. These outlying questions were considered in the negotiations, and they were adjusted by the terms of the treaty. The jurisdiction of the island of San Juan on the Pacific coast, then in controversy, was referred to the Emperor of Germany as arbitrator, with full and final power in the premises. By his award the claim of the United States was sustained. The fishery question was referred to arbitrators, but it was a misfortune that the award was not satisfactory to the United States, and the dispute is reopened with capacity to vex the two governments for an indefinite period. The claims against Great Britain growing out of the operations of the Confederate cruisers, known as the Alabama claims, were referred to arbitrators, by whose award the Government of the United States received the sum of $15,500,000. But the value of the treaty of 1871 was not in the award made. The people of the United States were embittered against the Government of Great Britain, and had Gen. Grant chosen to seek redress by arms he would have been sustained throughout the North with substantial unanimity. But Gen. Grant was destitute of the war spirit, and he chose to exhaust all the powers of negotiation before he would advise a resort to force. A passage in his inaugural address may have had an influence upon the policy of the British Government: "In regard to foreign policy, I would deal with nations as equitable law requires individuals to deal with each other. . . . I would respect the rights of all nations, demanding equal respect for our own. *If others depart from this rule in their dealings with us, we may be compelled to follow their precedent.*" The reference of the question at issue to the tribunal at Geneva was a conspicuous instance of the adjustment of a grave international dispute by peaceful methods.

By the sixth article of the treaty of 1871, three new rules were made for the government of neutral nations. These rules are binding upon the United States and Great Britain, and the contracting parties agreed to bring them to the knowledge of other maritime powers, and to invite such powers to accede to the rules. In those rules it is stipulated that a neutral nation should not permit a belligerent to fit out, arm, or equip in its ports any vessel which it has reasonable ground to believe is intended to cruise or carry on war against a power with which it is at peace. It was further agreed, as between the parties to the treaty, that neither would suffer a belligerent to make use of its ports or waters as a base of operations against the other. Finally, the parties agreed to use due diligence to prevent any infraction of the rules so established. Mr. Fish was then Secretary of State, and to him were Gen. Grant and the country largely indebted for the settlement of the Alabama controversy; but the settlement was in harmony with the inaugural address. Before the final adjustment of the controversy, by the tribunal at Geneva, Gen. Grant had occasion to consider whether the allegation against Great Britain, growing out of her recognition, in May, 1861, of the belligerent character of the Confederacy, could be maintained on the principles of public law. Upon his own judgment he reached the conclusion that the act was an act of sovereignty within the discretion of the ruler, for which a claim in money could not be made. This opinion was accepted, finally, by his advisers, by the negotiators, and by the country.

Grant's methods of action were direct and clear. His conduct was free from duplicity, and artifice of every sort was foreign to his nature. In the first years of his administration he relied upon his Cabinet in all minor matters relating to the departments. He held the head of a department to his full responsibility, and waited, consequently, until his opinion was sought or his instructions were solicited. In his conferences with the members of his Cabinet he expressed his opinions with the greatest freedom, and, upon discussion, he often yielded to the suggestions or arguments of others. His daily intercourse with them was free, confiding, and generous. He was so great that it was not a humiliation to acknowledge a change in opinion, or to admit an error in policy or purpose. In his intercourse with members of Congress upon the business of Government, he gave his opinions without reserve when he had reached definite conclusions, but he often remained a silent listener to the discussion of topics which he had not considered maturely.

His politics were not narrow nor exclusive. He believed in the growth of the country, and in the power of republican ideas. He was free from race prejudice, and free from national jealousy, but he believed in the enlargement of our territory by peaceful means, in the spread of republican institutions, and in the predominance of the English-speaking race in the affairs of the world. The spirit of philanthropy animated his politics, and the doctrines of peace controlled his public policy.

His Last Years.—After retiring from the presidency in March, 1877, Gen. Grant, with his wife and one son, sailed from Philadelphia, May 17, for a tour around the world. When the steamer arrived in the Mersey, the vessels of all nations there hung out their colors in greeting and welcome, a fitting prelude to the reception that was everywhere accorded him in his progress round the globe. He visited the places of greatest interest in Great Britain and on the Continent, was entertained by all of the crowned heads, made a cruise in the Mediterranean on the man-of-war "Vandalia," visited Egypt, and in January, 1879, sailed for India by way of the Red Sea. After visiting Bombay and Calcutta, he went to Hong-Kong, Canton, Pekin, and lastly to Japan. In September he crossed the Pacific, and on the 20th of that month landed in San Francisco. In February, 1880, he visited Mexico and Cuba. In the Republican National Convention held in Chicago in June, 1880, Gen. Grant's name was presented for the presidential nomination, and for 36 ballots he received a steady vote that only varied between 302 and 313. In August, 1881, he bought a house in New York city, which was thenceforth his residence. He also had a cottage at Long Branch, where he spent his summers. On Christmas-eve, 1883, he slipped upon the icy sidewalk in front of his house, and was so injured as to be laid up for some time. Meanwhile he had become a partner in a banking firm that failed through the dishonesty of the junior partner, and in May, 1884, he suddenly found himself bankrupt. Up to this time, the general had refused all solicitations to write the story of his military career for publication, intending to leave it to the official records and the future historian. Almost his only contribution to literature was an article entitled "An Undeserved Stigma," in the "North American Review" for December, 1882, in which he announced a change in his former opinion on the Fitz John Porter case, and gave the reasons that seemed to him to establish that general's innocence. But now he was approached by the conductors of the "Century" magazine, with an invitation to write on his principal campaigns, which he accepted for the sake of earning the money; and he accordingly produced four articles for that periodical. Finding this a pleasant task, and receiving offers from various book-publishers, he produced two volumes, in which he tells the whole story of his career, and shows himself to be a natural and charming writer, as well as a valuable contributor to history. The first volume was published in December, 1885, the second will appear in May, 1886, and the work has met with an enormous sale, reaching 325,000 copies in four months. The contract was signed on Feb. 27, 1885, and on Feb. 27, 1886, the publishers, Messrs. Charles L. Webster & Co., gave Mrs. Grant a check for $200,000, as a partial payment on sales already made. The largest amount that had heretofore passed from publisher to author in a single payment was the celebrated check for £20,000 (about $100,000) given by the Messrs. Longman to Macaulay, on sales of his "History of England." The Grant contract gives Mrs. Grant seventy per cent. of the profits on the American edition, and eighty-five per cent. of the profits on foreign editions.

A soreness in the roof of the mouth, for which the general consulted a physician in August, 1884, developed into cancer at the root of the tongue, which caused his death. There was nothing more heroic in his whole life than the diligence and determination with which he pursued his task under pain and disease, and in the midst of appalling difficulties, till he had completed his "Memoirs," conquered bankruptcy for those who were dear to him, and dropped the pen but four days before he passed away. June 16, 1885, he was taken to a cottage on Mount McGregor, near Saratoga, where he passed the remaining five weeks of his life. A public funeral was held in the city of New York on Saturday, Aug. 8, which was the most imposing spectacle of the kind ever seen in America. The body was deposited in a temporary tomb in Riverside Park, overlooking the Hudson, near 125th Street.

See Badeau's "Military History of Ulysses S. Grant" (3 vols., 1867–'81), and Young's "Around the World with General Grant" (2 vols., 1879). The portrait that forms the frontispiece of this volume has been engraved from the photograph that the general himself preferred—one that was taken in the first year of his presidency. (See pages 226–228.)

GREAT BRITAIN AND IRELAND (UNITED KINGDOM OF), a constitutional monarchy of western Europe. The supreme legislative power resides in Parliament, which must be convoked annually, as supplies are only voted, and the mutiny act renewed, from year to year. The executive authority and the initiative in legislation are, to a great extent, concentrated in the hands of the Prime Minister, who is appointed as the leader of the dominant party, and who selects his associates to preside over the departments and to prepare with him the schemes of legislation to be brought forward in Parliament. Prorogation is the legal death of Parliament; and legislation not finally enacted at the close goes for naught. There are no constitutional limits to the power of Parliament.

SIR HARDINGE GIFFORD,
Lord Chancellor of England.

Victoria I, Queen of Great Britain and Ireland, and Empress of India, was born May 24, 1819, and succeeded her uncle, William IV, June 20, 1837. The heir-apparent is Albert Edward, Prince of Wales, born in 1841.

The House of Lords is composed of the hereditary nobles of England, new English peers created by royal patent, the English bishops, 23 Irish peers elected for life, and 16 Scottish representative peers elected anew for each succeeding Parliament. Members of the House of Commons are elected under a household and lodger franchise. Every male citizen of full age who has occupied a house as owner or tenant for twelve months, and has paid his rates, and every lodger who has occupied lodgings for a year rented at not less than £50 per annum, unfurnished, is entitled to a vote. Under the act of 1872 that expired in 1880, but has since been continued from year to year, voting is secret and by ballot. The law passed in the second session of 1884 extended the borough franchise to the counties, making electoral qualifications uniform in both classes of constituencies and the same in Ireland as in Great Britain. The same act introduced a service franchise, conferring votes upon persons occupying houses or lodgings in virtue of their employments. In 1883 the total number of electors in the United Kingdom was 3,152,910. In Great Britain there were 1,066,371 county electors, 507,480 as occupiers, and 558,891 as owners, and 1,862,521 borough electors, 1,777,038 as householders, 22,241 as lodgers, and 63,242 as owners. In Ireland the total number of electors was 224,018, or one to 23 inhabitants, while in Great Britain the ratio was one to 10 inhabitants. The Reform Act of 1884 was expected to add 2,000,000 voters to the electoral roll of the United Kingdom. In the session of 1885 a redistribution bill was passed. The number of seats was increased from 658 to 670, England and Wales being represented by 499 members instead of 493, Scotland by 68 instead of 60, and Ireland by 103 instead of 105. Clergymen of the English and Scotch established churches, and of the Roman Catholic Church, sheriffs and returning officers in their own districts, and English and Scottish peers are ineligible.

Area and Population.—The area of the United Kingdom is 120,832 square miles. The population in 1881 was 35,241,482, comprising 17,254,109 males, and 17,987,373 females, distributed as follows:

DIVISIONS.	Square miles.	Population.
England	50,823	24,613.926
Wales	7,363	1,360,513
Scotland	29,820	3.735,573
Ireland	32,531	5,174,836
Isle of Man	220	53,558
Channel Islands	75	87,702
Soldiers and seamen abroad	.....	215,374
Total	120,832	35,241,482

In 1831 the population of Ireland constituted 31·8 per cent. of the total population of the

United Kingdom, in 1841 30·2 per cent., in 1851 23·7 per cent., 19·8 per cent. in 1861, 17·0 per cent. in 1871, and 14·6 per cent. in 1881. The proportion that the population of Wales bore to the total, increased during the period of fifty years from 3·3 to 3·8 per cent., that of the population of Scotland from 9·7 to 10·6 per cent. The population of England amounted to 53·6 per cent. of the total in 1831, 55·4 per cent. in 1841, 61·0 per cent. in 1851, 64·6 per cent. in 1861, 67·5 per cent. in 1871, and 69·8 per cent. in 1881. The population speaking the Celtic languages in 1881 was 2,067,359. Of the population of Wales and Monmouthshire, 950,000, or about 70 per cent., speak Cymric; of the population of Scotland, 231,594, or 6·20 per cent., speak Gaelic; and in Ireland 885,765, or 18·2 per cent. of the population, could speak Irish Gaelic. In England and Wales the density of the population is 446 to the square mile, in Scotland 125, in Ireland 160. The land of the United Kingdom is in the possession of a comparatively few individuals. In England and Wales the number of owners of real estate, outside of London, is 972,836—the number of owners of property exceeding an acre in extent, 269,547; the number of owners in Scotland, 132,230—of owners above an acre, 19,225; the number of owners in Ireland, 68,758—of owners above an acre, 32,614. The total number of owners in the United Kingdom is 1,173,824—of owners above an acre, 321,386; the average estimated rental per acre in England and Wales is $14.63; in Scotland, $4.80; in Ireland, $3.25.

The population of England and Wales on June 30, 1884, was computed to be 27,132,449; of Scotland, 3,866,521; of Ireland, 4,962,570; the total population of the United Kingdom, 35,961,540.

The population of England and Wales was divided in 1881 in respect to occupations as follows:

OCCUPATIONS.	Males.	Females.	Total.
Professional........	450,955	196,120	647,075
Domestic.	258,508	1,545,302	1,803,810
Commercial........	960,661	19,467	980,128
Agricultural........	1,318,344	64,840	1,383,184
Industrial..........	4,975,178	1,578,189	6,373,367
Non-productive, etc.	4,856,256	9,930,619	14,786,875
Total...........	12,619,902	13,334,537	25,974,439

In Scotland the division of the population in 1881 was as follows:

OCCUPATIONS.	Males.	Females.	Total.
Professional........	65,499	30,604	96,103
Domestic........ ...	25,292	151,278	176,565
Commercial........	126,743	5,383	132,126
Agricultural........	215,215	54,322	269,537
Industrial..........	675,964	256,689	932,653
Non-productive, etc.	690,762	1,437,827	2,128,589
Total...........	1,799,475	1,936,098	3,735,573

The population of Ireland was divided in 1881 as follows:

OCCUPATIONS.	Males.	Females.	Total.
Professional........	136,489	62,195	198,684
Domestic...........	34,058	892,093	426,161
Commercial.........	70,751	1,494	72,245
Agricultural........	902,010	95,946	997,956
Industrial..........	428,578	262,931	691,509
Non-productive, etc.	961,381	1,826,900	2,788,281
Total...........	2,533,277	2,641,559	5,174,836

The town population of England and Wales in 1881 was 15,445,296, against 12,910,647 in 1871; the rural population 10,529,143, against 9,801,619. The town and village population in Scotland in 1881 was 2,754,736, the rural population 980,837, the former showing an increase of 17·7 per cent., the latter a decrease of 3·96 per cent., since 1871.

The number of marriages in England and Wales in 1883 was 205,814, the number of births 889,815, of deaths 522,662; the number of marriages in Scotland 26,855, of births 124,462, of deaths 76,867; the number of marriages in Ireland 21,490, of births 116,224, of deaths 96,388. The proportion of illegitimate births was 4·9 per cent. in England in 1882, 8·5 per cent. in Scotland in 1883, and 2·6 per cent. in Ireland. The mean birth-rate for ten years was 3·54 per cent. in England and 3·46 per cent. in Scotland; the death-rate, 2·14 per per cent. in England and 2·10 per cent. in Scotland.

The population of London, inclusive of the outer ring of suburbs, was 4,766,661 in 1881, an increase of 22·7 per cent. since 1871, and 47·9 per cent. since 1861. London proper contained in 1881 a population of 3,816,483, which increased to 4,019,361 in the middle of 1884. The population of the other towns in England with more than 100,000 inhabitants in 1884, as computed by the Registrar-General, was as follows: Liverpool, 573,202; Birmingham, 421,258; Manchester, 338,296; Leeds, 327,324; Sheffield, 300,563; Bristol, 215,457; Bradford, 209,564; Nottingham, 205,298; Salford, 195,153; Hull, 181,225; Newcastle, 151,325; Portsmouth, 133,059; Leicester, 132,773; Sunderland, 123,204; Oldham, 122,676; Brighton, 112,954; Blackburn, 110,498; Bolton, 108,968. The population of the principal towns in Scotland in 1881 was as follows: Glasgow, 674,095; Edinburgh, 236,002; Dundee, 140,239; Aberdeen, 105,189. In Ireland, Dublin contained 249,602, with suburbs 349,648, and Belfast 208,122, Cork coming next with 80,124 inhabitants.

Emigration.—The total emigration from the United Kingdom between 1852 and 1883 was 5,405,917, of which number 3,575,174 went to the United States, 1,389,072 of them being English, 252,373 Scotch, and 1,933,729 Irish. The number of emigrants, including foreigners, to the United States in 1884 was 203,519, against 252,226 in 1883, 295,539 in 1882, and 307,973 in 1881; the number of emigrants to Canada in 1884 was 37,043; to Australasia, 45,944; total, 303,901 in 1884, against 397,157 in 1883; 4,699 emigrated to Cape Colony in 1884, and 12,696 to other places. The number of immigrants in 1884 was 123,466, and in 1883 100,503, making the net emigration only 180,435 in 1884, as compared with 296,654 in 1883. Of the emigrants in 1883, 320,118 were of British origin, of the immigrants 73,804. Of the emigrants in 1884, 242,179 were of British origin, comprising 147,660 English, 21,953 Scotch, and 72,566 Irish. Of the Irish emigrants nearly 60,000 went to the United States. The total number of emigrants in 1884 comprised 181,555 males and 122,346 females; but in the Irish emigration there was a slight preponderance of females, who numbered 36,310 to 36,256 males.

Commerce.—The total value of imports in 1883 was $2,134,457,895, against $2,065,098,040 in 1882. The exports of British products amounted to $1,198,997,365, against $1,207,335,810; the exports of foreign and colonial products to $328,187,985, against $325,967,760; total exports $1,527,185,350, against $1,533,303,570. The imports from foreign countries in 1884 were $1,641,050,370 in value; from British possessions, $493,407,525; the exports to foreign countries, $1,075,180,745; to British possessions, $452,004,605. The import and export trade with the leading commercial nations is shown in the following table:

NATIONS.	Imports.	Exports.
United States	$496,194,800	$183,662,530
British India	194,414,145	166,913,830
France	193,180,110	147,046,665
Germany	139,536,130	158,906,850
Australasia	129,681,005	134,197,450
Holland	125,577,930	79,361,650
Russia	104,880,910	38,149,415
Belgium	80,891,725	73,775,060
British North America	61,418,635	50,547,980
Sweden and Norway	59,171,570	27,054,860
Spain	58,118,315	24,381,215
China	50,688,695	22,641,010
Egypt	50,043,295	17,507,460
Brazil	30,692,605	35,076,665
Turkey	27,326,495	37,050,025
Roumania	17,582,210	7,012,205
Italy	16,962,220	40,974,115
Argentine Republic	3,694,390	25,252,130

The imports of cattle in 1883, valued at $46,661,210, were 474,750, an increase of 131,051 head as compared with 1882; the imports of sheep were in number 1,116,115, in value $12,591,910. Of bacon and hams the importation was 3,695,992 cwt., valued at $50,181,630, an increase of 791,583 cwt.; of beef, 1,094,008 cwt., increase 401,625 cwt.; total value, $14,471,985; of butter and butterine, 2,334,473 cwt., increase 164,756 cwt., value $58,869,665; of cheese, 1,799,704 cwt., increase 105,081 cwt., value, $24,452,000. The importation of wheat was 64,138,631 cwt., valued at $157,272,405, a decrease of 102,118 cwt.; of wheat-flour, 16,329,312 cwt., value $61,723,890, an increase of 3,271,909 cwt. The imports of corn, barley, and other grain were $116,647,795 in value. The imports of raw cotton were 15,485,121 cwt., valued at $225,211,480, a decrease of 444,443 cwt. The imports of lard were 853,541 cwt., valued at $11,235,080, increase 196,388 cwt.; of pork, 376,899 cwt., value $3,809,355, increase 86,312 cwt. The imports of refined sugar were 3,283,920 cwt., valued at $22,343,085, an increase of 517,797 cwt.; of unrefined sugar, 20,366,627 cwt., value $102,366,185, increase 527,452 cwt. The imports of unmanufactured tobacco were 56,475,199 lbs., value $8,874,830, an increase of 20,399,829 lbs. The imports of copper-ore were 163,781 tons, value $14,681,040, increase 11,713 tons; of copper, 38,097 tons, value $12,068,965. The imports of petroleum were 70,526,996 gallons, value $10,851,490, increase 10,831,014 gallons. Of wool 494,428,802 lbs. were imported, valued at $124,328,190, an increase of 9,498,478 lbs.; of tea, 222,262,431 lbs., value $57,712,655, increase 11,599,298 lbs.; of hewn timber, 2,152,868 loads, value $28,615,189, increase 130,212 loads; of split and sawn timber, 4,315,622 loads, increase 117,311, value $52,055,650. The values of other leading imports were as follow: wine, $27,259,765; hides, $19,014,310; coffee, $24,682,325; jute, $22,642,145; flax and linseed, $23,934,515.

The value of the cotton imports from the United States was $160,439,745, an increase of $24,141,595; of the wheat imports, $67,001,575, a decrease of $28,912,365; of flour, $41,151,880, a decrease of $10,629,465; of maize, $34,301,945, an increase of $25,670,235; of cattle, $17,686,815, an increase of $12,179,450; of bacon and hams, $39,502,605, an increase of $6,628,720; of beef, $13,371,490, an increase of $4,754,730; of cheese, $13,478,520; of wood, $58,715,180; of petroleum, $10,389,675, an increase of $2,003,635; of lard, $9,969,945, an increase of $1,458,255; of oilseed cake, $7,265,765, an increase of $1,297,290. In the imports of butter and tobacco from the United States there was a large increase, and a slight increase in tallow and pork, while those of timber, cheese, fish, hops, meat, leather, turpentine, and skins, showed a slight falling off.

The imports of bacon and hams in 1869 were 2·68 lbs. per head of the population, and in 1883 they were 10·96 lbs. The consumption of foreign butter in 1883 was 7·18 lbs. per capita, as compared with 4·52 lbs. in 1869; of foreign eggs the number consumed was 26·40, as compared with 14·38; of foreign cheese the consumption increased from 3·52 to 5·51 lbs.; that of imported corn and flour from 155·85 to 250·77 lbs.; that of sugar from 42·56 to 71·74 lbs.; that of tea from 3·63 to 4·80 lbs.

The leading exports of British products in 1883 were as follow:

ARTICLES.	Quantities.	Value.
Coal....tons..	21,670,926	$49,853,555
Cotton-yarn....pounds..	264,772,000	67,546,660
Cotton manufactures.yards..	4,538,888,500	314,680,125
Jute manufactures....do..	227,256,000	12,507,950
Linen manufactures....do..	162,256,100	27,197,845
Machinery	....	67,165,405
Iron and steel....tons..	4,043,308	142,951,080
Woolen-yarn....pounds..	33,438,500	16,332,440
Woolen manufactures..yds..	255,905,700	91,577,875

The following are the principal foreign and colonial produce exports for 1883:

ARTICLES.	Quantities.	Value.
Coffee.. ....cwt..	983,712	$17,156,345
Cotton, raw..............do..	2,207,400	26,269,615
Tea ....pounds..	42,733,234	11,974,025
Wool...................do..	277,181,359	79,487,315

The largest exports to the United States were the following articles: iron and manufactures thereof of the value of $31,665,325, an increase of $13,676,905; cotton goods, value $17,050,500; woolens, $15,905,060; linens, $12,903,380; jute, $5,540,920; alkali, $5,369,520; china and earthenware, $4,770,970. There was an increase in the exports to the United States of earthenware and woolen manufactures, jute, and wool, and a decrease in cottons, linens, alkali, machinery, hardware, rags, furs, etc.

The imports of gold in 1883 amounted to $37,743,500, of silver to $46,076,027; the exports of gold to $34,510,127, of silver to $45,341,147.

The unrevised returns for 1884 make the total value of merchandise imports $1,896,840,000, the value of exports of British and Irish produce $1,900,278,000. In the imports of food there was a falling off of about $112,000,000, the decrease in wheat and flour being $67,000,000, and in maize $15,000,000. In butter, cheese, hams, and pork, there was an increase. In raw materials there was a falling off of $22,400,000, and $40,000,000 in other articles. The principal feature in the export returns is the continuous decreae in the shipments of cotton goods and of iron and steel manufactures. The decrease in the cotton exports was 6 per cent. in the total value, but only 2½ per cent. in quantities. The falling off in the iron exports was also partly due to the decline in prices. A royal commission on the depression of trade was appointed after the assumption of the Government by the Conservatives, of which Lord Iddesleigh, formerly Sir Stafford Northcote, was made chairman. Several prominent Liberals declined to serve on the commission on account of the preponderance of protectionists in its membership. Mr. Giffen, reporting as Secretary of the Board of Trade upon changes in the volume of trade as affected by changes in the prices of imports and exports, stated that between 1873 and 1879 the falling off in foreign trade was not in quantities, but in prices; that in 1880 there was a slight recovery in prices and a great increase in trade; but that in 1883 prices were not higher on the average than in 1879. The exports of home produce, which sank in the aggregate value from £172,000,000 to £146,000,000 between 1873 and 1883, would have amounted to £212,000,000 in the latter year if prices remained at the level of 1873, and imports would have increased from £308,000,000 to £403,000,000, instead of £336,000,000, the total declared values in 1883. Instead of a decrease of 6 per cent., there was an increase in the quantities of exports of 13 per cent., and in exports an increase of 30 per cent. instead of the nominal increase of 10 per cent. in the ten years. Prices are about as low as they were before the gold discoveries.

VISCOUNT CRANBROOK,
Lord President of the Council.

Agriculture.—The harvest of 1884 was the finest for ten years, yet prices were 25 per cent. lower than a year before, wheat selling at less than $1 a bushel, representing a loss on the actual cost of cultivation. The quantity of wheat produced in Great Britain was 80,561,957 bushels, of barley 74,286,284 bushels, of oats 112,810,464 bushels. The acreage under wheat in 1884 was 2,676,477, being 63,315 acres more than in 1883, but 327,483 less than in 1882; the acreage under barley was 2,159,485, under oats 2,892,576, both showing a decrease, while the 562,344 acres under potatoes and 69,258 under hops showed an increase over 1883. The returns for 1885 give the acreage of wheat as 2,478,318, being 7·4 per cent. less than in 1884; of barley, 2,257,346, 4·1 per cent. more; of oats, 2,940,680, 0·9 per cent. more; of potatoes, 548,731, 2·9 per cent. less; of hops, 71,314, 3 per cent. more. The total acreage of green crops was 3,521,602, as against 3,487,703 in 1884. The total productive area in Great Britain was 32,544,000 acres, having been extended 79,000 acres during the year. In Ireland 15,219,930 acres were under cultivation, a decrease of 22,907 acres. The grain acreage showed a decrease of 5,500 acres, and green crops of over 3,000. In Ireland the acreage under grain and pulse in 1884 was 1,678,691, a decrease of 79,062 acres; the acreage under potatoes 798,942, a decrease of 7,525 acres; under flax 89,197, a decrease of 6,746 acres. Of the total area of England 80 per cent. is productive, in Wales 60 per cent., in Scotland 28·8 per cent., in Ireland 74 per cent. The number of horses in the United Kingdom increased from 1,898,745 in 1883 to 1,904,515 in 1884; cattle from 10,097,943 to 10,422,762; sheep from 28,347,560 to 29,376,787; while the number of hogs declined from 3,986,427 to 3,906,205, though in previous years there was an increase. In 1885 the number of cattle in Great Britain was 6,597,964, 5·2 per cent. more than in 1884; the number of sheep and lambs 26,534,635, an increase of 1·8 per cent.; the number of hogs 2,403,380, showing a further decrease of 7 per cent. The number of horses was 1,408,789, a decrease of nearly 6,000, while in Ireland there were 491,147, an increase of over 10,000. The number of cattle in Ireland was 4,228,751, of sheep 3,477,840, of hogs 1,269,122. Poultry decreased in Great Britain and increased in Ireland.

American cheese, which formerly sold in England only as a cheap food for the poor, is now made so like the finer grades of Cheshire cheese that a heavy fall occurred in the prices of English cheese in 1885.

Industry.—The total value of the mineral ores raised in 1883 was $87,473,765; of non-metallic minerals, principally coal, $271,555,283. The coal output was 163,737,327 tons, as compared with 156,499,977 in 1882; the quantity of iron-ore produced 17,383,046, as compared with 18,031,957 tons. Adding 3,191,073 tons imported, and deducting 8,708 tons of exports, the total consumption of iron-ore in 1883 was 20,955,411 tons. The exports of coal were 22,775,634 tons. The product of pig-iron in 1883 was 8,529,300 tons, of which 1,564,048 tons were exported, 3,101,775 tons used in wrought-iron manufactures, and 1,724,251 in the manufacture of Bessemer steel. The quantity of puddled iron produced was 2,730,504 tons, of open-hearth steel 455,500 tons.

The net importation of raw cotton in 1883 was 1,487,104,752 lbs., as against 1,519,113,008 in 1882; of wool, 218,712,695, as against 225,019,313. The number of textile factories in Great Britain and Ireland at the time of the latest returns was 7,105; the number of spindles, 53,102,528, of which 43,206,690 were for cotton; the number of power-looms, 725,704; the number of persons employed, 975,546, comprising 374,199 males and 601,347 females.

Shipping and Navigation.—During 1883, 23,239,544 tons of British and 8,865,536 tons of foreign shipping entered British ports, and 23,799,535 tons of British and 9,057,138 tons of foreign shipping cleared. Of the total tonnage, British bottoms constituted 72 per cent. The total tonnage entered and cleared with cargoes was 55,683,478, of which 41,747,142 tons were steam-vessels. Of the 32,105,080 tons entered, 23,239,544 tons were British, 2,028,493 Norwegian, 1,876,898 German, 993,114 French, 742,470 Danish, 671,646 Swedish, 660,213 Dutch, 440,423 Spanish, 434,221 Italian, 293,847 American, 290,307 Belgian, 226,874 Russian, 124,338 Austrian, 61,805 Greek, 10,723 Portuguese, and 10,164 of other nationalities. The tonnage of the United States showed a falling off of 76,000 tons as compared with 1882, and of nearly 500,000 in seven years. The tonnage entered and cleared at the port of London was 11,400,274, at Liverpool 10,634,842, at Cardiff 6,674,992, at Newcastle 5,494,969.

At the close of 1883 the number of vessels registered in the United Kingdom was 24,675, the total tonnage 7,242,216, being 31 fewer ships and 285,351 tons more than in 1882. There were 18,415 sailing-vessels, of 3,513,948 tons, and 6,260 steam-vessels, of 3,728,268 tons. In 15 years sailing-vessels had declined 7,382 in number and 1,364,285 tons, and steam-vessels had increased 3,316 in number and in tonnage 2,805,971 tons. In 1883 there were 9,998 sailing-vessels, of 653,518 tons, employing 33,498 men, and 1,569 steam-vessels, of 280,190 tons, employing 16,673 men, engaged in the home and the coasting trade between the Elbe and Brest; 618 sailing-vessels, of 85,944 tons, employing 3,224 men, and 137 steam-vessels, of 56,294 tons, employing 2,084 men, engaged partly in the coasting and partly in the foreign trade; and 3,543 sailing-vessels, of 2,630,497 tons, employing 58,584 men, and 3,047 steam-vessels, of 3,319,619 tons, employing 86,664 men, engaged in the foreign trade alone. The total shipping engaged in home and foreign trade comprised 18,912 vessels, the aggregate tonnage being 7,026,062, the number of men employed 200,727, not including vessels belonging to the colonies. The total shipping of the British Empire numbered 38,961 vessels, of 9,131,418 tons. In the beginning of 1885 the steam tonnage belonging to Great Britain, including all vessels of 500 tons and over, was 6,141,076; the sail tonnage, of vessels over 250 tons, 3,489,264. There was a net increase during 1884 of 235 steamers, of 449,516 tons, and a decrease of 165 sailing-vessels, of 27,624 tons; in iron sailing-vessels there was an increase of 39 vessels, of 98,093 tons.

The total amount of tonnage launched in 1884 was 761,432 tons, showing a decrease of no less than 495,397 tons as compared with 1883. As many as 50,000 workmen who found employment in the ship-yards were out of work in the beginning of 1885, and wages had fallen 20 per cent. within twelve months. Further reductions were made in 1885. Of the total tonnage built, 128,518 tons were on foreign account. There was an increase in the tonnage of sailing-ships built. The tonnage of steel vessels built was 293,309, showing a decrease of 34 per cent., while the decrease in iron vessels was 40 per cent. The difference in the cost of iron and steel plates has been reduced by improved methods of manufacture to $1.20 per ton. Steel vessels require 15 per cent. less metal for a given displacement.

Railroads.—The length of lines in operation in the United Kingdom at the beginning of 1884 was 18,681 miles; the total capital in paid-up shares and loans, $3,819,819,565; the receipts in 1883 from passengers, $143,604,248; from freight, $188,340,168; total receipts, including miscellaneous, $345,824,536. In the possessions of Great Britain there were 28,177 miles of railroads, making the total mileage of the British Empire 46,858.

Telegraphs.—The telegraphs were transferred to the state in 1870. The length of lines in 1884 was 27,604 miles, of wires 140,498 miles. The receipts in 1884 were $8,569,414, the expenditures $8,319,310.

The Army.—The average effective strength of the regular army during 1884 was 183,004. In the course of the year 33,924 recruits were enlisted for short, and 1,729 for long service. The losses were 1,521 by death, 4,478 by desertion, and 12,939 discharged. The number of men of all ranks provided for in the regular army estimates for 1885-'86 was as follows: Regular forces at home and in the colonies, 131,769; regular forces in India, 61,597, making the total of the regular army 193,366; army reserve, 53,250; militia, 141,334; yeomanry, 14,405; volunteers, 251,417; grand total, 653,772. The number of horses was 13,452 on the British and 9,746 on the Indian establishment. The actual strength of the regular army in the beginning of 1885 was 129,831 at home and in the colonies, and 58,826 on the Indian establishment.

The actual number of men available for the army, according to the report of the Inspector-General of Recruiting, was on Jan. 1, 1885, as follows: Non-commissioned officers and men actually serving in the ranks, 181,008; first-class army reserve, all trained men in the best period of life, 39,224; militia reserve, partially trained men, always available for war service, 30,813; total, 251,045. The strength of the militia was 104,380 men; that of the volunteers, who now carry the Martini-Henry rifle, 215,015 enrolled men; that of the yeomanry, 10,801; and that of the second-class army reserve, 1,225, making with the regular army and the first-class army reserve a total effective of 551,673 men, of whom the volunteers and yeomanry are not liable for foreign service.

After the failure of the Nile Expedition and the fall of Khartoum, the ministry announced that operations would be renewed against Osman Digna and the railroad from Suakin to Berber constructed, with a view to a campaign in the autumn for the purpose of overthrowing the power of the Mahdi at Khartoum. A proclamation was issued authorizing the calling out of the reserves, in order that 12,000 troops, including the native contingent, might be sent to Gen. Graham at Suakin. The supplementary estimates provided for an addition to the active army of 3,000 men.

SIR STAFFORD NORTHCOTE (EARL OF IDDESLEIGH),
First Lord of the Treasury.

When the Russian advance on the Afghan border finally roused the ministry to military activity, the Marquis of Hartington provided in the army estimates for the increase of the regular army by 15,000 men. The weakness of the British army lies not merely in its small numbers as compared with Continental armies, but also in the neglected state of its equipment and organization. The army could not be sent into the field with a sufficient artillery or engineer force, and, when it was at last considered necessary to prepare for mobilization, the War Office was overwhelmed with the rush of business, and the manufacturing resources of Great Britain were taxed to supply the stores that for ten years have been supposed necessary in the arrangements for mobilization.

The Navy.—The navy in 1884 consisted of 283 vessels, of which 62 were armored ships, including 7 unfinished. The number of vessels in commission was 150. There were besides 78 torpedo-boats, 23 first class, 48 second class, and 7 of wood. The ironclad navy comprised 6 turret-ships, including one not completed at the end of 1884, and 6 barbette-ships, 5 of them unfinished, for great naval warfare; 10 battle-ships of the second class, one of them unfinished; 19 cruisers, 3 of them not completed; 10 vessels suitable for coast and harbor defense; and 12 antiquated cruisers. With the appropriation of £3,100,000 obtained in December, 1884, for additions to the navy, besides £1,600,000 for naval ordnance, and £825,000 for fortifying coaling-stations, the Government prepared to build 4 new first-class ironclads, 5 belted cruisers, 1 torpedo-ram, 7 sea-going torpedo cruisers called scouts, 5 gunboats, and 15 first-class torpedo-boats. The depression in the ship-building trade was relieved by orders given for a good number of these, while three of the ironclads were begun in the Government dock-yards. During the Afghan crisis the work of construction and repairing was kept up night and day. The policy adopted in the construction of new vessels was to confine the armor-clads to a displacement of not more than 10,000 tons and a cost of $3,750,000, giving special attention to the element of speed. The "Admiral" type, represented by the "Collingwood" and the "Benbow," was abandoned, and the plan of a complete belt of armor was no longer condemned. In July a series of practice manœuvres were conducted in Bantry Bay. A flotilla of torpedo-boats and small craft attempted to remove a wire boom without success; but the torpedo-ram "Polyphemus," steaming seventeen knots or more, eluded the attacks of torpedo-boats and Whitehead torpedoes aimed at her hull, and broke the five-inch steel wire cable without a tremor or a pause, though she would have succumbed in an actual attack to the sunken torpedoes exploded by contact. This successful performance recommended the type of the "Polyphemus" to the Admiralty, which decided to build a number of fast steel rams on the same model. The torpedo-boats that have been built to accompany the ironclad squadrons were found to be unsuitable for ocean manœuvres, and will have to be replaced with others of larger dimensions. The recent English type of ironclads, in which deck-room is sacrificed to safety, are for long cruises extremely uncomfortable. The unarmored coastguards are too short and slow to be manœuvred in combination with modern ironclads. The adequacy of a boom for harbor protection, guarded by mines and torpedo-craft, was satisfactorily established. Among the vessels completed during the year, the principal ones were the "Colossus," the "Collingwood," and the ram "Polyphemus." Among the new ships launched were the "Benbow" and the "Camperdown," whose imperfect belt of armor has been the subject of much contention. During the Russian war-scare a volunteer system for coast defense was organized. Volunteer engineers and submarine mining militia have been assigned to the principal ports. The sum of £6,425,000 was voted for naval armaments, coaling-stations, and submarine mine defenses after the accession of the Conservative ministry.

Finances.—The total revenue for the year ending March 31, 1885, was £88,043,110, and the total expenditure £89,092,883, leaving a deficit of £1,049,773. The revised estimate of revenue made in November, 1884, when the income-tax was raised from 5*d.* to 6*d.* in the pound, was £86,733,000. The original estimate was less by about £1,200,000, the expected yield of the extra penny of income-tax during the remainder of the financial year, the portion remaining to be collected in 1885–'86, being estimated at £720,000. The actual receipts from the income-tax were £12,000,000, exceeding the estimate by £750,000. The customs receipts were £20,321,000, about half a million more than the estimated amount. The surplus over the estimates, both in the income-tax and in customs, was largely due to accelerated payments, induced in the latter by anticipations of fresh duties on tea and tobacco. The excise produced £26,600,000. The spirit duties, customs and excise, yielded £18,295,000, which was £141,000 less than the previous year. The stamp duties produced £11,925,000, which was £435,000 more than in 1883–'84, owing to collections of arrears in the succession duties. The yield of the land-tax was £1,065,000, that of the house duty £1,885,000. The total receipts from taxation were £73,796,000. The receipts from other sources were £14,247,000, the post-office producing £7,905,000, the telegraph service £1,760,000, the receipts from crown lands £380,000, the miscellaneous revenue £3,175,000, interest on advances £1,027,000, the latter showing a decrease by non-payment of the £199,000 of interest on the Suez Canal loan by the Egyptian Government.

The expenditures exceeded the estimates in a greater degree than the receipts. The original estimate of supply was £54,188,000, and the revised estimate in November £56,673,000. The actual expenditure was £58,066,000. The charges on the consolidated fund amounted to £31,103,000. The permanent charge for the debt was £28,884,000, about £90,000 less than in 1883–'84. The interest on local loans was £465,000, on exchequer bonds for the Suez Canal shares £200,000, the other charges on the consolidated fund £1,479,000. The discrepancy between the estimates and the actual expenditures was owing to the heavy appropriations in supply during the last quarter of the year. The total army charges for the year amounted to £18,955,000, the navy charge £11,427,000. The remission of £344,500 in the Egyptian contributions to the army and navy added that sum to the expenditures under those heads. The grant to India for the Afghan war was £250,000, the grant for 1883–'84 having been £1,000,000. The civil-service expenditure was £17,562,000, showing an increase due to additional expenditures for education. The customs and inland revenue expenditure amounted to £2,745,000, the post-office expenditure to £4,666,000, the expenditure for the telegraph service to £1,731,000, that of the packet service to £729,000.

The regular army estimates for 1884–'85 amounted to £15,931,000, which were increased by supplementary votes of £1,624,000 for the Nile and £725,000 for the Bechuanaland expedition to £18,280,000. The actual expenditure on the army was £18,955,000, including £292,500 voted to make good the Egyptian contribution. The regular estimates for 1885–'86 provided for an expenditure of £17,820,700. For the new operations at Suakin a supplementary vote of £942,000 was obtained, and for warlike preparations in view of the Afghan complications a credit of £11,000,000, of which £4,500,000 was to cover expenditures incurred in Egypt and the cost of retiring from the Soudan, and £6,500,000 to be devoted to special military preparations. Of the latter sum, £4,000,000 was to be expended in strengthening the army and £2,500,000 to naval preparations. Of the sum applicable to expenditures connected with the Egyptian expeditions, £400,000 was for the army, including £750,000 spent on the Suakin and £400,000 on the Wady Halfa Railroad, and £500,000 for the navy, including cost of bringing away the troops.

The funded debt, which stood at £710,476,000 on March 31, 1880, was reduced to £640,631,000 in 1884, and on March 31, 1885, the capital stood at £640,182,000. The capital amount of the portion of the debt that was converted from 3 per cent. into 2¾ and 2½ per cent. stock in 1884–'85 was nominally increased. The reduction in the interest charge effected by this conversion was £47,000 for the year. During the year terminable annuities of the value of £5,514,000 expired. During the five years of Mr. Gladstone's ministry the diminution in the nominal amount of the funded debt was about £70,000,000, in the nominal amount of the total liabilities £30,000,000, the actual amount of debt paid off £12,000,000, which is about the amount of the charges incurred for the wars of the preceding government, including the £5,000,000 that was India's share in the cost of the Afghan war, but was assumed by the Imperial Government.

LORD GEORGE HAMILTON,
First Lord of the Admiralty.

Mr. Childers estimated the expenditures for 1885–'86 as follows:

Permanent charge of debt	£28,037,000
Interest on local loans	552,000
Interest on Suez Canal bonds	200,000
Other charges on consolidated fund	1,760,000
Army	17,751,000
Navy	12,386,000
Afghan war grant	250,000
Civil service	17,687,000
Customs and excise services	2,801,000
Post-Office	4,855,000
Telegraphs	1,840,000
Packet service	....
Total	£88,872,000

The total revenue he estimated at £85,180,000, based upon a 5*d.* income-tax. Adding to the deficit of £3,732,000 the vote of credit of £11,000,000, and allowing £200,000 for the supplementary estimate, he calculated upon a total deficit of £14,932,000. This sum the Government proposed to raise partly by new taxes divided between the rich and the poor. Upon property-owners they proposed to levy an additional income-tax of 3*d.*, calculated to produce £5,400,000, to impose "death duties" on personal as well as on real property, which was expected to add £200,000 to the revenue of the year, to obtain £150,000 by a tax on the property of corporations in lieu of succession duties, and £100,000 more from a stamp duty on securities payable to bearer. Consumers were expected to contribute £1,650,000 in the form of fresh indirect taxes. It was proposed to raise the duty on spirits from 10*s.* to 12*s.* a gallon, and the beer duty from 6*s.* 3*d.* to 7*s.* 3*d.* a barrel. The increase in the spirit duty was estimated to add £900,000 to the receipts for the year, that in the beer duty £750,000. The remainder of the estimated deficit Mr. Childers proposed to deal with by suspending payments of terminable annuities representing capital amounting for the year to £4,600,000, leaving £2,812,000 to be met by a continued interception of the same part of the sinking fund in 1886–'87. The intended increase in the beer and spirit duties would coincide in time with a relaxation of the wine duties, as the treaty negotiated with Spain allowed wine up to 30 degrees of alcoholic strength to be admitted under the duty of 1*s.* per gallon, whereas the previous limit was 26 degrees. The excitement produced by the proposal to tax the poor man's drink induced the Chancellor of the Exchequer to modify this part of his scheme. The failure of the Anglo-Spanish treaty left the wine duties undiminished, while the cessation of war preparations enabled the Government, according to an estimate made when the customs and inland revenue bill was introduced, to restrict expenditure on the vote of credit to £9,000,000. Mr. Childers accordingly modified his proposals by cutting down the additional liquor duty one half, while the augmented beer duty was to be levied for one year only. In consequence of this vote of the House of Commons on the amendment of Sir Michael Hicks-Beach to the tax bill, the addition to the spirit and beer duties and the proposed new probate, legacy, and stamps duties were cut off, and through the change of Government that ensued it devolved upon the mover of the amendment to frame a budget to meet the deficiency in some other way.

Military preparations were relaxed as the Afghan difficulty approached a settlement. The revised estimate of Mr. Childers, presented June 4, assumed that £2,000,000 could be saved out of the vote of credit if peace were assured. It was discovered by the new officials that the accounts of the Admiralty Office did not tally with the statement made by Lord Northbrook of the amount expended on the navy. It turned out that the expenditures were nearly £900,000 in excess of the estimate, and that the greater part of them had been already incurred at the time when Mr. Childers made his statement. The Conservatives sought to make political capital out of the discovery. Lord Northbrook treated their criticisms as a personal attack upon himself, and defended the loose system of accounts and the administrative blunders that were brought to light, such as the construction of a large number of torpedo-boats without providing them with torpedoes, on the plea of the pressure and haste of the war preparations. A committee of the House of Commons investigated the subject, and reported that a severer financial control of the Admiralty is necessary.

Sir Michael Hicks-Beach adopted the budget framed by the Liberal Government in its main provisions. The beer and liquor taxes and the succession duty, upon which the preceding Government was defeated, were eliminated. The deficit remaining unprovided for by the suspension of the sinking fund, and the imposition of new taxes, he proposed to treat as floating debt, instead of hypothecating the sinking fund of the ensuing year. The 8*d.* income-tax, the duty on corporate property, and the tax on foreign bonds and securities payable to bearer, were retained, thus throwing the entire burden of the new taxes on owners of property, and producing £5,650,000, or £1,850,000 less than the original budget proposals. The sum available from the sinking fund would be increased by the amount of the new sinking fund, which is the difference between the charge of the debt each year and the fixed sum of about £28,000,000 per annum appropriated for the service of the debt by the act of 1875. This it was proposed to appropriate also, the amount for the year being estimated at £622,000. The deficit remaining the Chancellor of the Exchequer proposed to cover by the issue of Treasury bills to the amount of not more than £4,000,000, the interest on which would add £36,000 to the expenditures of the year. This deficit he estimated, the expenditure on the vote of credit being taken at £9,850,000, to be £2,827,000 for the year, or, including the deficit of £1,050,000 carried over from 1884–85, £3,877,000 in all. The revised budget was adopted without contest by Parliament.

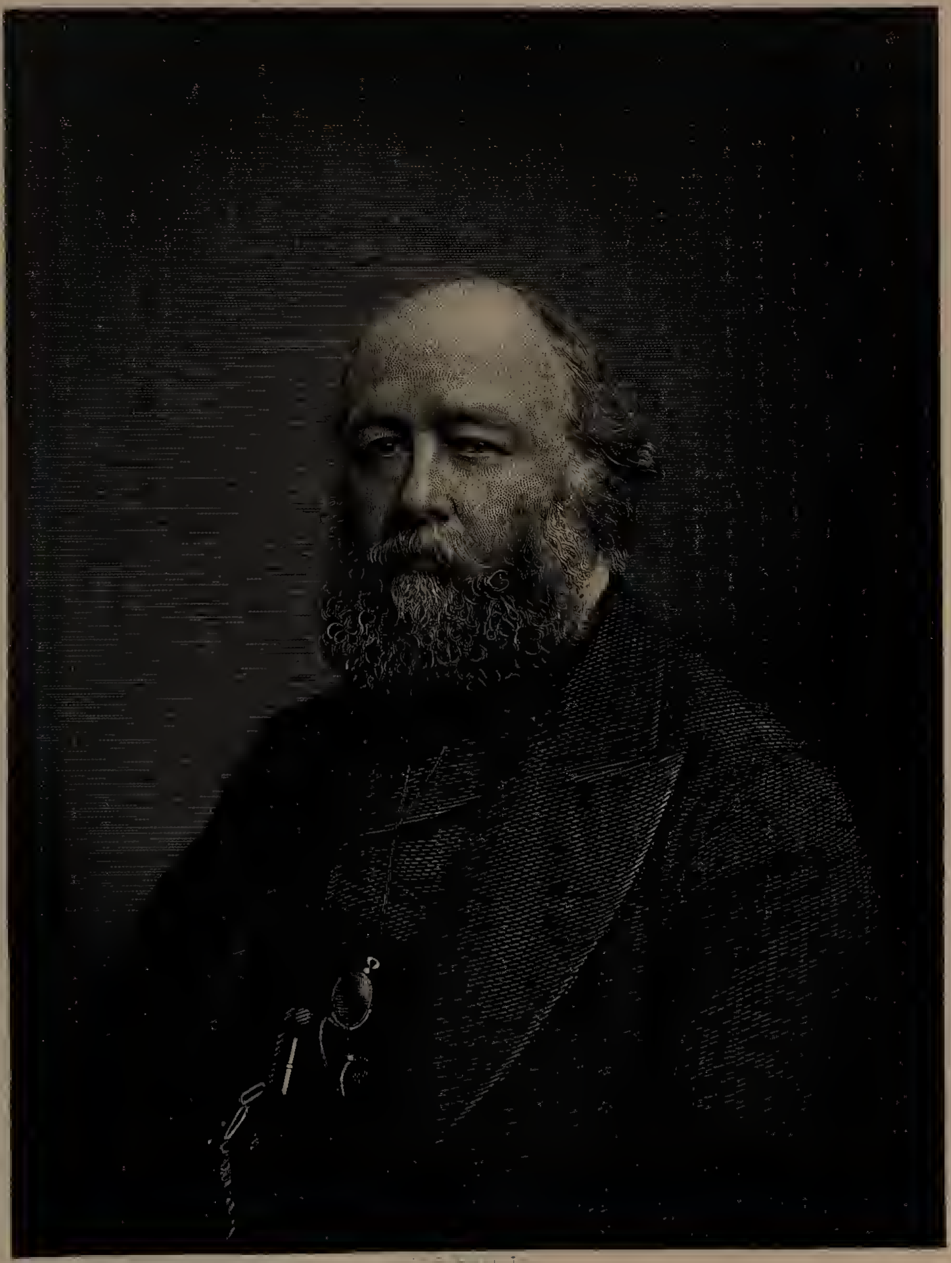
Change of Ministry.—The combination of Whigs and Radicals that composed the Gladstone Cabinet was divided on important questions of home, Irish, Egyptian, colonial, and foreign policy, and was only kept together by a series of shifts and compromises. The fickle and irresolute actions of the Government exasperated the Irish and estranged every Cabinet in Europe. The Conservatives were able to charge the ministers with changing their declared policy in scores of instances, with not only failing to carry out their avowed intentions in every case, but of doing everything that they had declared they would not do. In the last week in February Sir Stafford Northcote's vote of censure on the Egyptian policy of the Government came on in the House of Commons. The Conservative leader laid stress on the absence of a clearly defined line of policy in the ministerial programme. The proclamation authorizing the calling out of the reserves had been issued, and Mr. Gladstone had announced the intention of renewing the Suakin campaign, completing the Berber Railroad, and "smashing" the Mahdi in the autumn. Sir Stafford Northcote protested against incurring fresh risks and sacrifices without a recognition of the British responsibilities for Egypt and those portions of the Soudan that are necessary for the security of Egypt. Mr. Morley, representing the section of the Radicals that disapproved of the intervention in Egypt and in the Soudan, offered a counter-motion deprecating further operations against the Mahdi. In the division on the vote of censure the ministerial majority dwindled down to 14 votes, 288 members—Conservative, Irish, Nationalist, and Independent — voting against the Government; while of the 302 Liberals who voted with the Government against Sir Stafford Northcote's motion, 112 supported Mr. Morley's amendment. The Egyptian financial agreement was assailed by the Conservatives and a division was taken in March, which gave the Government a majority of 48. The sanguinary but resnltless campaign against Osman Digna was criticised by the opponents of the Egyptian policy of Mr. Gladstone on both sides of the House. The Afghan question then arose. There was a wide-spread impression that the antagonism the Liberals had provoked, especially in Germany, hindered the settlement of the dispute, and that retractions and concessions of the ministry in the diplomatic conduct of the case increased the dangers of the situation. The Conservatives were careful not to lay themselves open to the charge of wishing to precipitate a war or to embarrass the Government by a partisan attack. The war credit, in which the cost of the Egyptian expeditions was lumped with the money destined for war preparations, was introduced with a stirring speech from Mr. Gladstone. Soon after, the Government abandoned the position it had taken in reference to the affair on the Kushk and withdrew its claims for satisfaction, to the disappointment of the advocates of a vigorous policy. The budget was delayed because the Cabinet insisted on postponing controversial legislation until the seats bill was disposed of. The succession duties proposed by Mr. Childers displeased the Tories, who objected to imposing additional taxes on the land-owning class until they were relieved of the burden of paying nearly the whole of the local rates. The manufacturers and sellers of beer and whisky, and the farmers who grow the grain of which those beverages are made, raised an outcry against the proposed beer and spirit duties, which met with a sympathetic response among the masses of the people who were affected as consumers. To lay a higher tax on the poor man's drink, at the same time that Spanish wines were to be introduced under the low rate of duty paid by French wines previously, was an aggravation of an old popular grievance against the Liberal party. The proposed tariff changes also increased the discrimination against whisky, which has long been a subject of Irish complaints, making alcohol in that form pay six times as much duty as in the malt liquors drunk by the English people. The Conservatives offered an amendment to the tax bill, which united the diverse interests prejudicially affected by the new taxes. The "whip" of the Ministerial party sent out an ordinary notice to the Liberal members, many of whom had not returned from the Whitsun vacation when the debate came on. A dozen or more Liberals left the House while the debate was proceeding, and about sixty were absent when the

SIR MICHAEL HICKS-BEACH, BART.,
Chancellor of the Exchequer.

division was taken. Mr. Gladstone intimated that the ministry would resign if the amendment were carried. The debate resulted in a vote of 264 Conservatives and Parnellites against 252 Ministerialists. The ministry were at once suspected of inviting their own defeat, since at the last moment the debate might have been adjourned and a ministerial majority secured, in order to escape from a dead-lock on the Irish question. The Crimes Act was about to expire, and the Radical members of the Cabinet were opposed to its renewal. Mr. Gladstone desired to discontinue coercion, but the Whigs in the ministry insisted on preserving exceptional powers, though agrarian crime had practically ceased, and Lord Spencer was unwilling to continue in office if the law were allowed to lapse. A compromise was reached by which the coercive clauses were to be dropped, but the procedure clauses, relating to change of venue and special juries, and the penalties against boycotting, retained. On the question as to whether the boycotting clauses should be left subject to executive discretion, there was an irreconcilable difference of opinion. Mr. Gladstone announced the resignation of the Cabinet on June 9, the day after the adverse vote. The Marquis of Salisbury was reluctant to undertake the task of carrying on the Government with a minority in the House of Commons, and without the opportunity of appealing to the country, for a dissolution was out of the question before the registration of voters under the new franchise and redistribution bills should be completed. It was urged upon the Government that they were not justified in exposing the country to a minority administration under these circumstances, but Mr. Gladstone declared that there was no other way but to resign, and argued that the Conservatives could not refuse office after their unsparing attacks on the Government. Lord Salisbury asked for pledges from the Liberals that Government business should have the precedence in the House, and that there should be no opposition to an issue of Exchequer bonds to cover the deficit. Mr. Gladstone declined to commit his party to a promise, though willing to express a belief that there would be no disposition to embarrass the Government. Mr. Gladstone and Lord Salisbury submitted their views to the Queen, and kept up a correspondence for two weeks. Those Conservatives who were least hopeful of the results of the general election desired to secure for their party the distribution of honors and patronage incident to the assumption of office, and many believed in the tactical advantage of a lease of power, however brief. Finally the Conservative leaders concluded to undertake the responsibility without pledges from the Liberals. They decided to promote Lord Randolph Churchill to a prominent place in the party councils, and to provide posts for the other representatives of the "fourth party," because they relied on Churchill's popular development of Toryism as the chief means of gaining the support from the democracy of the towns and the new county electorate. As Lord Randolph Churchill was unwilling to co-operate with Sir Stafford Northcote, the urbane leader of the party in the lower house was transferred to the House of Peers with the title of the Earl of Iddesleigh, giving up his place to Sir Michael Hicks-Beach. The outgoing ministry, besides promoting a number of existing peers, created six new ones, among them Mr. Samuel Morley and Sir Nathaniel de Rothschild. The Conservatives created a number of peerages upon taking office, all of them, except one, connected with the construction of the Cabinet. Mr. Gladstone declined an earldom.

The New Ministry.—This was constituted on June 24. It consisted of the large number of sixteen members, as many as sat in the previous Cabinet. Lord Salisbury became Prime Minister and Secretary of State for Foreign Affairs. Sir Stafford Northcote became First Lord of the Treasury, a post connected with the premiership since the days of Walpole. Sir Michael Hicks-Beach, as Chancellor of the Exchequer, assumed the leadership of the House of Commons. Lord Randolph Churchill was made Secretary of State for India, an appointment that was construed abroad as indicating an aggressive attitude toward Russia. Sir Richard Cross became Secretary of State for the Home Department; Mr. W. H. Smith, Secretary of State for War; Lord John Manners, Postmaster-General; Col. Stanley, Secretary of State for the Colonies; Lord George Hamilton, First Lord of the Admiralty; Mr. Stanhope, Vice-President of the Council; Sir Hardinge Gifford, Lord Chancellor, with the title of Lord Halsbury; Lord Cranbrook, President of the Council; Lord Harrowby, Lord Privy Seal; the Duke of Richmond, President of the Board of Trade; Lord Carnarvon, Lord Lieutenant of Ireland; and Mr. Gibson, raised to the peerage with the title of Lord Ashbourne, Chancellor of Ireland, with a seat in the Cabinet. Outside the Cabinet Mr. Arthur Balfour became President of the Local Government Board; Mr. Plunkett, First Commissioner of Works; Mr. Chaplin, Chancellor of the Duchy of Lancaster; and Sir William Hart-Dyke, Chief Secretary for Ireland. Sir Henry Drummond Wolff, the only member of the "fourth party" not provided with an office, was appointed a special commissioner to inquire into the Egyptian question, though his selection was much criticised on account of his connection with the Anglo-Egyptian Bank and of his strictures on the character and acts of the Khedive. A brief sketch of each of the members of the new ministry is given below—except the Premier, for whose history see SALISBURY, MARQUIS OF.

Sir Henry Stafford Northcote, Earl of Iddesleigh, sat in the House of Commons from 1855 until he accepted a peerage upon the formation of the Cabinet. He was member for North



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Salisbury

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Devon from 1866, and was the parliamentary leader of the Conservatives after Disraeli entered the House of Lords. He was President of the Board of Trade in 1866 and became Indian Secretary the following year. During the second ministry of Disraeli he was Chancellor of the Exchequer. He was born in 1818, was educated at Eton and graduated at Balliol College, Oxford, was called to the bar in 1847, and filled the offices of Legal Adviser to the Board of Trade and Financial Secretary to the Treasury. He succeeded to the title of baronet upon the death of his grandfather, the seventh baronet, in 1851.

Sir Michael Edward Hicks-Beach was born in 1837, was educated at Eton and Christchurch, and succeeded his father in the baronetcy in 1854. He has represented East Gloucestershire in Parliament since 1864. He was Secretary of State for the Colonies from 1878 to 1880.

Sir Hardinge Gifford, who took the title of Lord Halsbury upon succeeding to the Lord Chancellorship, is an eminent lawyer.

Henry Howard Molyneux Herbert, Earl of Carnarvon, was born in London in 1831. He was educated at Eton and graduated at Christchurch as a first-class in classics in 1852. He succeeded his father, the third earl, in 1849. He was appointed Under-Secretary for the Colonies in 1857, and was Colonial Secretary in 1866 and 1867, and from 1874 to 1878.

Gathorne Gathorne-Hardy, Viscount Cranbrook, was born in 1814, was educated at Shrewsbury and Oriel College, Oxford, and was called to the bar in 1840. He entered the House of Commons in 1856, and was member for the University of Oxford from 1865 until he was made a peer in 1878. He held office under former Conservative ministries as Home Secretary and Secretary for India.

Lord Randolph Henry Spencer Churchill, a younger son of the late Duke of Marlborough, was born in 1849. He was educated at Eton and graduated at Merton College, Oxford. He has sat in Parliament for Woodstock since 1874. He led the independent annex to the Conservative party known as the "fourth party," in which his parliamentary associates were Mr. Gorst, Sir Drummond Wolff, and Mr. Balfour. He was one of the most active members of the Duchess of Marlborough's committee for the relief of Irish distress.

Lord George Francis Hamilton is a son of the Duke of Abercorn, and was born in 1845, and educated at Harrow School. In 1864 he entered the army as an ensign, retiring in 1868. From 1874 to 1878 he was Under-Secretary of State for India, and then Vice-President of the Council of Education until 1880. In 1878 he was appointed a Charity Commissioner.

Col. Frederick Arthur Stanley is the brother and presumptive heir to the Earl of Derby. He was born in 1841, was educated at Eton, received a commission in the Guards, and entered Parliament in 1865, sitting as member for North Lancashire since 1868. He was Secretary for War under Disraeli.

SIR RICHARD ASSHETON CROSS, G. C. B.,
Home Secretary.

Sir Richard Assheton Cross occupied the position of Home Secretary during the Beaconsfield administration. He was born in 1823, and received his education at Rugby and at Trinity College, Cambridge, became a barrister in 1849, entered Parliament in 1857, and has represented Southwestern Lancashire since 1868.

Dudley Francis Stuart Ryder, Earl of Harrowby, was born in Brighton in 1831, was educated at Harrow and Christchurch, and succeeded his father, the second earl, in 1882. He was elected to Parliament from Lichfield in 1856, and re-entered the House of Commons in 1868, representing Liverpool as Viscount Sandon until he inherited a peerage. From 1878 to 1880 he was President of the Board of Trade.

William Henry Smith was born in London in 1825. He is a partner in a London mercantile firm, and has sat in Parliament as one of the members for Westminster since 1868. He was Secretary of the Treasury from 1874 to 1877, and then First Lord of the Admiralty until the retirement of the Beaconsfield Cabinet in 1880.

Edward Gibson was born in County Meath, Ireland, in 1837, graduated at Trinity College, Dublin, and was called to the Irish bar in 1860. He has been a member of Parliament for Dublin University since 1875, and was Attorney-General for Ireland from 1877 to 1880.

John James Robert Manners, usually called Lord John Manners, is the brother and heir presumptive to the Duke of Rutland. He was born in 1818, and was educated at Eton and Trinity College, Cambridge. He entered Parliament in 1841 as member for Newark, and has sat for Northern Leicestershire since 1857. He was Chief Commissioner of Works and Public Buildings under Lord Derby in 1852, and again in 1858 and 1859, and from 1866 till 1868. He was Postmaster-General from 1874 till 1880.

Charles Henry Gordon-Lennox, Duke of Richmond and Gordon, was born in 1818, and was educated at Westminster and at Christchurch, Oxford. As Earl of March he held a commission in the Horse Guards, and he sat in the House of Commons for West Sussex from 1841 until he succeeded to the dukedom in 1861. He was President of the Poor Law Board in 1859, President of the Board of Trade in 1867 and 1868, and Lord President of the Council from 1874 till 1880.

Edward Stanhope, second son of Earl Stanhope, was born in 1840, and educated at Harrow and Christchurch, Oxford, becoming a fellow of All Souls' College, and in 1865 a barrister. He entered Parliament in 1874 as member for Mid-Lincolnshire, and held the post of Secretary of the Board of Trade from 1875 till 1878, and then that of Under-Secretary for India until the dissolution of Parliament in 1880.

The Session of Parliament.—The second session of 1884 was the beginning of the sixth and last session of the Parliament elected in 1880. The reform question was practically settled by the compromise between the leaders of both parties. Before Parliament adjourned for the holidays the franchise bill had been passed by the two houses, and the redistribution bill read a second time in the Commons. Mr. Courtney resigned his post of Parliamentary Secretary of Finance, as a protest against the single-member system. He and the other friends of minority representation made efforts to enlist popular support for the scheme of proportional representation, yet only thirty-one votes were recorded for Sir John Lubbock's resolution in favor of this scheme, on March 2. Sir John Hay raised a protest against the disproportionate representation granted to Ireland, and, though many Tories and some of the Whigs sympathized with his sentiment, the compact between the parties was maintained, and his amendment rejected by an overwhelming majority. In committee there was a lively discussion of Mr. Bryce's proposal to abolish the representation of the universities, which Sir Charles Dilke, who had charge of the bill, was in favor of personally, and Mr. Gladstone also, as was inferred from his reserve on the subject; yet only independent Radicals and Parnellites supported the motion. The schedules defining the names and boundaries were debated for more than a month, though no important alterations were made. Mr. Raikes succeeded in getting the perpetual penalties imposed on voters of corrupt constituencies reduced, while Prof. Thorold Rogers was unsuccessful in his effort to have persons convicted of corruption disqualified as parliamentary candidates. On the 11th of May the bill was read a third time, and sent to the House of Lords, where it passed through its stages rapidly, but had not reached a third reading when the ministerial crisis supervened. On the registration bills, which were framed separately for each of the three kingdoms, serious dissensions arose. An amendment admitting resident members of universities to the franchise was carried against the Government. The exclusion of undergraduates in England was subsequently agreed to; but the Lords reversed this decision. A more important subject of controversy came up, upon which strong feeling was aroused throughout the country. In the original bills, persons who had received charitable relief within the year were excluded from the registers. When the Irish bill was under consideration the disability of recipients of medical relief was removed by a considerable majority. Mr. Davey proposed an amendment to the English bill to the same effect; but the Government resisted the change, and it was negatived by a vote of 170 to 102. On the report Mr. Davey brought up the question again, and carried through his motion by 87 votes against 50. The House of Lords struck it out, though the ministers were now in favor of the alteration, and when the bill returned to the House of Commons Sir Henry James, the Attorney-General, abandoned the position last taken by the ministry, and again opposed the amendment, which was lost by a majority of 107 against 66.

An amendment to the Irish bill requiring the expenses of the new registration to be defrayed by the Exchequer, and not made a charge upon local taxation, was carried by a small majority. Sir Massey Lopes proposed the same change in the English bill, and finally Mr. Gladstone compromised the matter by considerably augmenting the grant in aid from imperial funds originally proposed. The three registration bills were signed May 21.

The energies of Parliament were exhausted, the parties demoralized, and politicians careless of all public business that could not be turned to electioneering account when the ministerial crisis and change of Government occurred.

The new ministers took up the task of legislation with more vigor than their predecessors displayed. Following the guidance of Lord Randolph Churchill, the Conservatives formed a combination with the Irish party. In the negotiations with Mr. Gladstone no mention was made of the crimes act, but it was understood that it would be allowed to lapse. Lord Salisbury and Lord Randolph Churchill were called upon to explain previous declarations on both Irish and foreign affairs, but they made no attempt to harmonize their language in opposition with the policy they adopted as responsible ministers. In the statement made by Lord Salisbury, as soon as the composition of the Cabinet was arranged, he did not mention Irish affairs. The foreign policy of the Government was limited by the arrangements made by the retiring ministers. The Conservatives were in a position to claim credit for putting an end to disturbing complications without being held responsible for the course imposed upon them by the conditions under which they assumed office. Although the uncertainty of their tenure was unfavorable to the conduct of diplomatic affairs, yet the foreign relations of Great Britain proceeded more smoothly in Lord Salisbury's hands than under Lord Granville's direction. The Afghan dispute was already settled in principle by the concession of Penjdeh and the final acceptance of the Lessar boundary. By obtaining a trifling abatement of the Russian claims in respect to Zulfikar, the Cabinet could claim to have made better terms than the Gladstone ministry were able to obtain. The men of both parties were agreed that no reliance could be placed upon Afghanistan as a "buffer," and approved of strengthening the Indian defenses, and establishing a "scientific frontier," while the military authorities were inclined to consider the actual frontier settled upon by the Gladstone Government a good strategic boundary. In regard to Egypt, Lord Salisbury contended that, in view of the financial and military dangers, it was impossible to bring the British occupation to an end. The Egyptian convention, which was strongly criticised by the Tories, but was carried in March, on the plea of urgency, by a vote of 294 to 246, still remained unexecuted. The Tory Cabinet was now enabled, by the good-will of the powers and the favor of Prince Bismarck, to issue the Egyptian loan.

Lord Carnarvon, who was left by the Prime Minister to unfold the Irish policy of the Government, stated his intention to govern in Ireland with the ordinary law only. It was announced that the laborers' bill would be proceeded with, and that Lord Ashbourne would bring in a land-purchase bill. The Irish party was determined to force the Conservatives to take an unquestionable position on the Irish question, and the Tory politicians were not unwilling to join in reflections on the Spencer administration that provoked Mr. Gladstone and Mr. Chamberlain to defend coercion. Mr. Parnell revived the Maantrasna controversy, and demanded an investigation. The Government opposed a parliamentary inquiry, but promised that Lord Carnarvon would investigate fairly any case brought before him. The cool desertion of their former allies in defense of a rigorous government in Ireland exasperated Lord Hartington and Sir William Harcourt. The former read a letter from Mr. Gladstone, commending the administration of Earl Spencer. Lord Randolph Churchill and Sir John Gorst, the Solicitor-General, went beyond the Chancellor of the Exchequer in disparaging coercion and insinuating a belief in the charges against the Whig rule in Ireland. One or two Tories of the old school revolted against the "Maantrasna alliance." With the help of the Parnellites the Government was able to carry its financial measures before the close of July. The ministry could with justice shift the responsibility

THE EARL OF CARNARVON,
Lord Lieutenant of Ireland.

for the budget, as well as for the Afghan settlement and the Egyptian arrangement, upon the late Cabinet. Sir Michael Hicks-Beach declared that he would under other circumstances have framed a very different budget. The Irish members demanded their privilege in Parliament, when Mr. Bright, at a banquet to Lord Spencer, denounced them as "disloyal to the Crown and directly hostile to Great Britain," and said that they "had displayed a boundless sympathy for criminals and for murderers," but the leader of the House objected to raising a question of privilege on utterances made outside. The Chancellor of the Exchequer promised further advances to meet the demands of the Irish Roman Catholic clergy on the education question.

The understanding with the Parnellites enabled the Government, in the few weeks that remained between their assumption of the administration and the end of the session, to accomplish much more than their predecessors had hoped to do in the way of legislation. A list of bills of a non-contentious character was announced as the programme with which the ministry was prepared to proceed in the beginning of July. Some of these had been abandoned by Mr. Gladstone, and some were new measures.

The Australasian Federal Council bill was passed without serious opposition (see Australasia). The bill creating the office of Secretary of State for Scotland was carried through, though Sir Lyon Playfair led a vigorous attack on the transfer to the new Secretary of the superintendence of education, previously exercised by a committee of the Privy Council. Lord Salisbury introduced a bill embodying the recommendations of the royal commission on the dwellings of the poor, a project which he had taken under his special care.

Two of the measures that were enacted, the bill removing the disabilities of recipients of medical relief and the criminal amendment bill, were attended by considerable public excitement during their discussion. Over the first a curious contest took place in Parliament. The full effect of the disqualification of hospital and dispensary patients was not appreciated by the politicians of either party when the question was before Parliament in the earlier part of the session. A struggle now took place between Conservatives and Liberals, in which they endeavored to wrest from each other the credit of passing a bill for its removal to which there was no serious opposition. Upon the maintenance of the disqualification by the upper house, Mr. Jesse Collings brought in a bill to enfranchise recipients of medical relief. Mr. Balfour, the President of the Local Government Board, adopted it as a Government measure. He admitted that the Government would have been willing to let the subject rest if the Radicals had not endeavored to make party capital out of it, and that he shared to some extent the opinions of the opponents of the measure who objected to giving votes to recipients of charity, and feared that the franchise would eventually be extended to the whole pauper class, and a strong motive for thrift and self-help removed. His timid and unskillful handling of the measure enabled the Radicals to obtain possession of it again by carrying against the Government an amendment admitting to the franchise recipients of medical comforts, as well as of treatment and medicines; but in the upper house, by a piece of sharp practice, a Conservative peer took it out of the hands of the Liberals.

The criminal law amendment bill for the protection of young girls was forced upon Parliament by means of a sensational popular agitation that scandalized English society and attracted the attention of the civilized world. The editor of the "Pall Mall Gazette" started the agitation in favor of a change in the law of seduction, raising the age of legal consent, which under the existing law was twelve years. He asserted that there exists in London a market, patronized by wealthy lechers, in which very young girls are sold, the usual price being twenty-five dollars; that physicians are found willing to examine them and sign certificates that they are maidens; that secluded and padded rooms exist in which to accomplish their ruin by violence if they resist; and that there are agencies for sending the victims abroad, where they are inducted into a life of prostitution. These statements were supported by a mass of corroborative evidence and detailed instances, based partly on an official report and partly on investigations made by the reporters of the newspaper. A young girl was procured for Mr. Stead, the editor, examined, examined again while under the influence of chloroform by a medical man, taken to a house where her violation could have been accomplished with impunity, and then sent to France, where she was committed to the care of respectable people. When threatened with prosecution, the editor intimated that prominent merchants and professional men, members of Parliament, noblemen, and even princes of the royal family, could be forced to depose experiences in connection with the traffic in maidens. He offered to submit his proofs to the Archbishop of Canterbury, Cardinal Manning, and Mr. Samuel Morley, representing the Anglican, the Roman Catholic, and the Dissenting churches. They accepted the trust, and after examining the evidence, including the case of the girl procured for the editor for the purpose of showing that the agencies described were still in operation, they reported that the existence of such practices was established. The leaders of the Salvation Army aided Mr. Stead in his investigations and took a prominent part in the agitation. An enormous mass-meeting was held in Hyde Park, and a petition with 500,000 signatures in favor of raising the age of consent to eighteen years was presented to Parliament. Mr. Gladstone expressed himself in favor of that limit. Although strong class antagonisms were aroused by the agitation, the question was discussed without party feeling in Parliament. The Home Secretary introduced a bill, which was elaborated in the House of Commons in a temperate and practical spirit. Defilement of girls under thirteen years of age was made a felony, instead of twelve years, which was previously the minimum age and still is in the law of marriage. The legal age of consent was raised to sixteen years, and the seduction of girls between the ages of thirteen and sixteen was made a misdemeanor. If accompanied by intimidation or the use of stupefying draughts, or even false pretenses, such as a promise of marriage, it becomes a criminal offense. Mr. Stead, the originator of the agitation that resulted in this amendment of the law, was afterward tried for the abduction of the girl Armstrong and abetting an assault upon her in having her examined by a French midwife. It was brought out in the evidence that she was not a "child in stock" obtained from a professional procuress, as Mr. Stead supposed, but had been engaged from her mother, probably for service, by his agent, Rebecca Jarrett. He was sentenced to three months' detention for abetting an indecent assault, while Jarrett and the midwife were sent to the penitentiary.

Lord Ashbourne's Irish land-purchase bill differed from Mr. Trevelyan's measure of the preceding session in substituting for the local guarantee, which would not work, the retention by the Land Commission of 20 per cent. of the purchase-money, if the state advanced the whole amount, until the purchasing tenant paid off a part in installments. Mr. Gladstone's objections on financial grounds were met by limiting the amount to be advanced by the state in any single year to £5,000,000. Lord Spencer criticised the bill, but admitted its necessity. It was treated with indifference by the Irish members, and criticised by Conservatives as well as by Liberals, but was passed in both houses as a non-contentious measure. The Irish laborers bill was passed in substantially the same form in which it was introduced by the Liberals.

Lord Salisbury's housing of the working-classes bill was intended to give effect only to the non-contentious recommendations of the commissioners. The provision for the sale of prison-sites for less than their market value was strongly objected to as savoring of state socialism, and was accordingly dropped. Other features in the bill were criticised on the same ground, yet it became law without much opposition. The bill provides that a person letting a house without taking reasonable precautions that it is in a proper sanitary condition, is liable for damages if sickness or death result from such neglect. It requires all persons letting houses, to the rich as well as to the poor, to keep them in a healthful and habitable condition, as was required before in the case of furnished houses or lodgings. The bill in the provisions directed against overcrowding empowers the Local Government Board, instead of the parish authorities, to build lodging-houses for the working-classes under Lord Shaftesbury's act. It also contains a remarkable provision amending the Settled Land Act by permitting tenants for life of entailed estates to sell or lease land for laborers' dwellings at less than the market value.

LORD RANDOLPH CHURCHILL,
Secretary for India.

Mr. Bradlaugh again raised the question of his right to sit in the House of Commons for Northampton, and was again excluded by a vote of 263 to 219. In Lord Randolph Churchill's able speech on the Indian budget, he went out of his way to attack the supineness of Lord Ripon's administration, and thus revived the controversy over that remarkable episode of the Gladstone ministry. Mr. Shaw-Lefevre's bill reducing the minimum rate for telegrams to sixpence was carried in its original form, and the modifications introduced by the new Postmaster-General were rejected. The charge under the new law is sixpence for twelve words, addresses included, with a half-penny for every word additional. Parliament was prorogued August 14.

Irish Affairs.—The "dynamite war" practically ceased with the two explosions that wrecked the interior of Westminster Hall on Jan. 24, and the simultaneous dynamite outrage in the Tower. James Cunningham, an Irish-American, aged twenty-two, was arrested while leaving the Tower after the explosion. Harry Burton, an Irishman, who was arrested as his accomplice, and Cunningham, had gone backward and forward several times between England and the United States, and their arrival in London had more than once been attended by a dynamite explosion. They were both on the train on Jan. 2, 1885, when an explosion took place in the Underground Railroad between King's Cross and Gower Street. The valise filled with dynamite that was found at Charing-Cross station was identified as belonging to Burton. They were tried for treason-felony on the charge of "levying war against her Majesty" by a series of treasonable acts, beginning with the explosion at the Victoria station on Feb. 25, 1884, and culminating in the attempt to destroy the Tower of London. Both were convicted on May 18, and sentenced to penal servitude for life. While these two men were awaiting trial an explosion occurred in the Admiralty building in London, on April 23, to the authors of which and their motive the police could find no clew. The explosions in Westminster Palace and the Tower spurred American legislators to take action against dynamiters. The Edmunds resolution in the Senate was followed by the passage of anti-explosives acts by some of the State legislatures.

The Irish parliamentary leaders were after this not disturbed in the conduct of the Irish question by the party of "physical force." In April the Prince of Wales made a tour in Ireland. After one or two ostentatious manifestations of loyalty, the Nationalists, deeming the trip a political move arranged by Lord Spencer and the Cabinet, answered with counter-demonstrations that left no doubt of their complete ascendency over the Irish people. When the question of renewing the Crimes Act came up, the Irish party and their English enemies became ferocious in their antagonism. The part providing for trials by three judges without a jury had remained a dead letter because the judges refused to act in such courts, but the prosecuting officers had made the freest use of the part enabling them to change the venue of a trial and to empanel special juries. With these special juries the administration of justice was a sham, and the lives and liberties of persons suspected of agrarian crime less safe than they would have been in the hands of the most prejudiced judges. The clauses against intimidation, boycotting, riots, unlawful assemblies, taking forcible possession of lands and houses, aggravated assaults, assaults upon the police and bailiffs, and being a member of an illegal association, were carried out with the aid of the extraordinary military and detective forces that replaced the ordinary police. The power given the Lord Lieutenant to prohibit public meetings was not exercised as frequently as the Loyalists desired. The "curfew clause" was seldom used. The power to arrest strangers was not frequently exercised, though Henry George was thrown into jail under this clause in the west of Ireland. The press clause has not been enforced to any great extent against newspapers printed in Ireland, but has been used to prevent the circulation of the "Irish World" and the "United Irishman." The right of examining witnesses before any person is accused of a crime, and the power of quartering extra police upon a district, were freely employed, and the Lord Lieutenant has frequently exercised the power of levying compensation on districts in which agrarian crimes have taken place. Summary jurisdiction was exercised by resident magistrates extensively, and the right of search was occasionally employed by the police. Agrarian crime had practically ceased when the Liberal Cabinet had under consideration the re-enactment of the Crimes Act, partly because the extraordinary authority conferred by the act was vigorously enforced under Lord Spencer's administration, partly because the secret Fenian societies were no longer active, and partly because the landlords desisted from wholesale evictions, having no longer the motives that inspired them before rents were settled under the Land Act. Any benefit that they could derive now from eviction was frustrated by the practice of boycotting, which the Irish Executive was powerless to suppress. "Land-grabbers" and "grass-grabbers" were shunned and banned, and were not safe from the terrors of the "unwritten law," though the Government furnished policemen to attend them and force their unwilling neighbors to deal with them. The Liberal Cabinet when it retired had determined to rescind the coercive clauses of the Crimes Act, and to empower the Viceroy to use at his discretion the clauses relating to special juries and change of venue. In regard to boycotting no conclusion was reached, some members of the Cabinet being willing to leave the exercise of the provisions regarding boycotting to the discretion of the Lord Lieutenant, while others insisted upon retaining them unconditionally. The Conservatives returned to the ordinary law, and formed a political alliance with the Parnellites, which, together with the announcement of Mr. Parnell's "platform with only one plank, and that one the plank of national independence," stimulated political passions in Ireland. Evictions increased, and were followed by an increase of boycotting and no recurrence of agrarian crime such as was predicted by the Whigs. On July

12 a soldier of a Welsh regiment killed a man at Waterford, and in consequence the soldiers were mobbed by the citizens, and the regiment was removed to prevent further trouble. The crash of the Munster Bank, in Cork and Dublin, occasioned financial distress throughout a great part of Ireland. On Nov. 12 a gentleman farmer, named Curtin, near Tralee, County Kerry, was murdered in his house, after killing one of his assailants, whose object was to rob the house of a quantity of fire-arms. In the same district there were other cases of blackmailing. The co-operation of the clergy in the Land League had much to do with the general cessation of crime and violence. A Loyalists' Defense Co-operative Union was inaugurated at Cork in September for the purpose of aiding boycotted individuals and supplying them with goods which the local dealers refused to sell them, and finding a market for their produce.

In the official report of the working of the Crimes Act for 1884 there were 762 cases of agrarian crime enumerated, of which 423 consisted in intimidation by threatening letters or otherwise. There were 91 cases of injury to property, 57 of mutilation of cattle, not a single case of murder, and only one of assault upon a bailiff. In 686 cases, or 90 per cent. of the total, no person was convicted or made amenable.

Lord Carnarvon was spared the abuse and reviling which his predecessors had to undergo. In the autumn he made a tour in the west of Ireland. The new administration endeavored to cope with intimidation and boycotting by means of the conspiracy laws and by requiring local leaders of the League to give bail for good behavior. The Land League condemned violent and unlawful acts in the severest terms, and discouraged boycotting except in cases of manifest hardship and injustice. Land-grabbers were still denounced and boycotted, with the approval of the leaders of the National League. Publicans and car-owners were exempted from the obligation to boycott by the local branches because the authorities threatened to cancel their licenses.

The appointment of Dr. Walsh, the President of Maynooth College, to be Cardinal McCabe's successor as Archbishop of Dublin and Primate of Ireland, dissipated the growing disaffection of the Irish toward the Roman See that had alienated many of the laity from the Church and had lately spread to the clergy and threatened to end in a schism. The Pope, in discountenancing the Irish movement long after the entire body of the Irish clergy had gone over to Parnell, was influenced not solely by the small but powerful body of English Catholics and the representations of Mr. Errington, the unofficial envoy of the English Government in Rome, but by general political considerations and the anti-revolutionary policy of the Curia based upon the dogmas of the Church. The candidate of the English Government and the English Roman Catholics was Dr. Donelly, who had scarcely any Irish support. The Pope was about to appoint Archbishop Moran, of Australia, who was already summoned from Sydney, when their consultations with the Irish bishops in Rome convinced the Roman ecclesiastics that the wishes of the Irish people could not safely be ignored. During the conferences of the Irish bishops with the cardinals in Rome, Bishop Nulty wrote a pastoral in which he declared that the Irish people would desert the Roman Church if their national aspirations were condemned. On July 27 Dr. Walsh, the most outspoken Nationalist among the Irish bishops, who had received the almost unanimous vote of the chapter, was duly appointed by the Pope to the archbishopric of Dublin. Upon his return to Ireland, the new archbishop affirmed that there was danger no longer of Ireland being misrepresented in Rome, and that she could look to Rome for sympathy and succor in her hour of trial. The parish priests were already, as a common thing, chairmen of the local branches of the League. Instead of forbidding the clergy to interfere in political meetings, as his predecessors had done, the archbishop himself took a prominent part in the autumn electoral campaign.

After the close of the session, Mr. Parnell startled England by announcing that the Irish party would raise in the next Parliament the demand of national independence. The abolition of the viceroyalty was a proposition that was gaining ground, and had Clifford Lloyd for its latest advocate. Home rule, in the shape of local self-government by county boards, either English party was willing to grant in the fullest measure if that would satisfy Irish demands. Mr. Parnell now defined as the "irreducible minimum" the restoration of Grattan's Parliament in College Green. He even refused to hamper the legislative independence of Ireland by accepting Mr. Gladstone's condition that separation should not be the result, urging English statesmen to trust the Irish altogether, since intense disloyalty and disaffection had been the only outcome of their timid policy in the past. In answer to Mr. Chamberlain's reservation that Irish industry should not be protected at the expense of English manufactures, he expressed the opinion that the Irish Parliament would wisely begin its activity by establishing a protective tariff to foster the few branches of industry in which the Irish can excel, but which have been crushed by hostile British legislation. The extension of local self-government was approved by the Irish leader, but he would listen to no scheme which did not place the control of the police in the hands of the local bodies. After the elections were over, the English people were startled by an intimation that Mr. Gladstone was prepared to act with the Nationalists in securing a measure of home rule that would satisfy their national aspirations. The Tories were precluded from offering such a concession with the present composition of parties because of the unalterable opposition of the Irish Conservatives.

The political alliance with the Conservatives was kept up in the electoral campaign. On Nov. 23 a manifesto was issued in the name of the National League, advising all Irish voters in Great Britain to vote for the Conservative candidates. The sins of the Liberal party, especially those committed against Ireland, were denounced in scathing terms. The three or four English Radicals who stood by the Irish party in the late Parliament were the only Liberals that received Irish votes with the approval of the League. The intention of the Irish leaders to contest a number of English constituencies containing a large Irish population was abandoned in most of the boroughs, but in one the Parnellite candidate was successful. In Ireland the League organization assumed complete control of the nominations, easily overcoming the opposition that was raised in one or two districts. Mr. Callan, Mr. O'Donnell, and Mr. O'Sullivan, of the advanced wing of the party, who had sometimes rebelled against the parliamentary lead of Mr. Parnell, were left off the ticket. Mr. Callan, who set up as an opposition candidate, accused Mr. Parnell of intimidating voters, and threatened to dispute the election of Col. Nolan, the elected member for his district. The League ticket swept the country, every province but Ulster returning a solid delegation of Parnellites. The Irish Liberals and the Moderate Home-Rulers disappeared from Parliament. In Ulster eighteen Orange Tories were elected; but the majority of the counties of that province fell in line with the League.

The Electoral Campaign.—The Conservatives went into the contest without a comprehensive programme, relying upon the diplomatic blunders and military failures of the Liberals and their wasteful financial administration to produce a Tory reaction. The division in the Liberal ranks was in their favor; yet, instead of seeking a coalition with the Whigs, they preferred to maintain the alliance with the Irish party. Mr. Chamberlain came out early with a Radical programme embracing free education, laborers' allotments, parodied as constituting a promise of three acres and a cow to all the new voters, the abolition of entails, the disestablishment of the Church, and direct taxation. The Whigs declared against all the Radical propositions, and appealed for party unity and a campaign without a platform on the strength of Mr. Gladstone's name, declaring that his umbrella was wide enough to cover all shades of Liberalism, and that "the old pilot" would safely guide them as before. The Conservatives allowed the Tory Democrats to give the cue to the campaign arguments. They raised a protest against disestablishment in England, which was not made an immediate issue by the Radicals; but only independent Tories resisted the disestablishment of the Scottish Church. They objected to making the schools free. In the controversy on this question the United States was frequently adduced, on the strength of the census returns, as a country in which illiteracy prevails. They ridiculed and picked to pieces Mr. Chamberlain's socialistic projects, but did not allow him to raise a distinct issue on the land question, or on that of the reform of taxation except in regard to land-taxes. The repugnance to state socialism, which is as strong among the body of the Tory party as among the Moderate Liberals, was not echoed by the spokesmen of the campaign, who left it to be inferred that they would set to work as willingly as the Radicals, but with more practical wisdom and a more conservative regard for the sacredness of property, for the creation of a peasant proprietary, and the improvement of the condition of the laboring-classes. The sections of the Liberal party led by Mr. Chamberlain and Lord Hartington, respectively, engaged in open hostility and rivalry until Mr. Gladstone induced the former to hold back some of his radical theories, and the party managers compelled rival Liberal candidates in doubtful districts to allow arbitrators to make a selection between them. Mr. Gladstone, who took no part in the early part of the canvass on account of an ailment of the vocal organs, and was absent on a health tour in Scotland and Norway, issued in September a manifesto, in which he defended his administration, though admitting mistakes in the Soudan, and advocated the projects approved by the Moderate Liberals, such as the enfranchisement of the soil, the establishment of local government, the registration and easy transfer of land, the equalization of taxation on land and personal property, and severer measures against obstruction in Parliament. Some of the Radical schemes, such as the abolition of school fees, disestablishment, and the reform of the House of Lords, he spoke of as ulterior subjects of legislation or discussion without indicating his own views, except in equivocal and non-committal phrases. In November Mr. Gladstone assumed personal control of the canvass, and delivered two of his great speeches in Midlothian.

The Land Question.—One of the foremost questions in practical politics on which action in the next Parliament is expected is that of land reform in Great Britain. Owing to the embarrassments of land-owners and farmers, caused by the sinking in the price of grain and other produce, due to foreign competition, all parties advocate changes of one kind or another in the feudal land laws of Great Britain, which until lately were defended by the Conservatives as the indestructible basis of the social and political institutions of England. The relief of landed property from its peculiar burden, the local rates, and the imposition of an equal share of these taxes for public charity, education, etc., on personal property, has been, while the Tories were out, one of their chief legislative demands. This cry was made less of now because of its unpopularity with the democracy, re-enforced by the new electorate. The benefit would, moreover, fail to redeem from their financial entanglements the large mass of entailed and settled estates that were unable to meet their current charges. The agitation for the restoration of the corn laws, whether coupled with the protection of British manufactures, or yoked with a patriotic imperialistic scheme for a customs union with the colonies, had failed to obtain sufficient popular support to be inscribed on the Tory banners. The Conservatives were at the end of their projects for the direct benefit of the landlord class, and hence looked to their opponents for proposals for the extraction of crippled land-owners from perplexities that reacted on the general welfare. With regard to the Radical demand for "free land," American competition has wrought a remarkable change in the *noli me tangere* attitude taken by the aristocracy in Stuart Mill's times. The land-owners as a class are now desirous of complete freedom of sale. The great Conservative lawyer, Lord Cairns, in the Settled Estates Act of 1882 quietly revolutionized the principle of entail. Under the old law entailed property could not be alienated by a present owner without the consent of all the parties in remainder, that is, usually, his heir and the next in descent after the immediate heir. The tenant for life would thus have to wait for his grandson, not yet born at the time of the settlement, to arrive at full age, and then obtain the consent of both son and grandson before selling any portion of the hereditary estate. Whether land was settled at the coming of age or the marriage of the heir, or devised by will, nothing short of an act of Parliament could permit a deviation from the exact terms of the trust, though the interests of all parties suffered. Lord Cairns's act enables a tenant for life to sell any part or the whole of an estate, with the exception of the mansion and demesne, provided the proceeds of the sale are applied, not for his own use, but in paying off mortgages, improving lands, or otherwise for the benefit of the remainder-man according to the trust deed. The house and park may also be sold, with the approval of the court. The Radical opponents of the custom of entail would go further, and forbid the practice of binding up land for three lives, and dissolve existing trusts of estates in remainder. The Settled Estates Act had very little effect, partly because the limited owners of estates had no interest to sell except the unselfish one of benefiting the family estate when the rental was impaired by disposing of a part, partly because there was no market for large estates, and partly because of the delays and expenses attending the sale and transfer of real estate. The latter difficulty most affects small properties, of which there are a vast number, run down and neglected, waiting for purchasers. In the times of their prosperity, land-owners bought up 40*s.* freeholds, for the sake of controlling parliamentary elections. The change in the electoral laws has deprived these properties of their principal value. These cottage properties no rich man now cares to hold, while no poor man can pay the heavy charges for conveyancing in addition to the price of the land. There are many small farms in the vicinity of towns which the tenants would purchase if they could be easily transferred from one owner to another; but these petty farmers have a dread of parchment deeds which cost them much trouble and expense, and will entail additional trouble and expense upon their family after their death. The larger farmers have little motive to become proprietors at present, as much of the corn-land is rented for £1 an acre, which is only 5 per cent. on the estimated average value of the improvements. The simplification of land-transfers by doing away with settlements and entails, and by the substitution of a simple registration of title for the intricate formalities designed by lawyers to prevent instead of to facilitate the transfer of land, are the means by which many expect with Mr. Goschen that land will become as salable as consols, so that "the living hand" shall "grasp the living soil." The process of drafting deeds is now a work of months, and the cost to each party to a sale is equal to 5 per cent. of the purchase-money. The fees of the land-brokers with their charges for plans, advertisements, etc., amount to 5 per cent. Thus 15 per cent. of the capital value of the property must be paid to the intermediaries of a sale. A record of deeds, such as is customary in America, is kept in the counties of York and Middlesex, under acts of Parliament of the reign of Anne. The advocates of reform prefer the Australian system, in which a registration of title, with a description of the parcel conveyed, takes the place of deeds and all other formalities, an opportunity being first given by advertisement for contesting a disputed title. Leases, mortgages, and incumbrances would be registered in like manner, and descriptions would follow the ordnance-survey map, not yet completed for the whole of England.

Facility of transfer is not, under the present conditions of agriculture, expected to create the peasant proprietary which was the ideal of former assailants of feudal customs. The Radicals are not satisfied with a reform that will merely transfer the soil from the hands of one class of rich men into those of the more opulent newly rich. Henry George's idea of the confiscation of rent is the property of theorists; yet his doctrine has made an impression on politics, as evinced by the demand that new burdens should be imposed on land-owners, notwithstanding their losses and perplexities. All Radical land theories now have a socialistic tendency. The farming class, impoverished by bad seasons, cattle-diseases, low prices, and high rents, as the actual workers of the soil, are deemed a class better worth preserving than the landlords. A large section of the

Radical party desire to extend some of the principles of the Irish land laws to Great Britain, and secure for the tenant-farmers of England and Scotland benefits in the direction of the "three F's." Although some landlords spend largely in improvements, the average amount is not such as to entitle them to the credit they have claimed on this score. Sir James Caird estimates the annual expenditure for the whole of Great Britain at £2,000,000, while the rental is £67,000,000 and the capital value of the soil £2,000,000,000. The sympathies of the Radical party are still more actively enlisted on behalf of the agricultural laborer. A bill introduced by Jesse Collings provides for the restitution of all common lands, wastes, roadsides, and other inclosures and encroachments that have been made since 1800, such lands to be placed in trust of the local authorities for the benefit of the laboring-classes of the districts in which they are found. The demand for the creation of a peasant proprietary was revived. The restoration of the small cultivator in England would be in some respects an economic advantage, although on the whole large farming is conceded to be the most productive. A good part, at least, of the £12,000,000 worth of butter, £5,000,000 worth of cheese, £4,000,000 worth of potatoes and vegetables, and £3,000,000 worth of poultry and eggs, now imported from abroad every year, might then be produced in Great Britain. The conversion of arable land into pasture, and the increase of game-preserves, were offenses for which the land-owners were called to account by democratic opinion. Homes and allotments must be provided for the displaced laborers now migrating into the overcrowded labor markets of the cities. The wretched hovels with a single room, in which large families huddle together, must be replaced by decent cottages with a garden-plot attached. Proposals for providing such allotments out of the rates were drafted into a bill. Some seek to couple this scheme with a plan for securing a fairer rating of the mansions and pleasure-parks of the aristocracy by having the ratable valuation declared by owners, at the risk of seeing their property expropriated at their own rating by the local authorities, and partitioned among peasant purchasers. The democracy demand that all waste lands and all lands used for sporting purposes should be immediately taken in hand and allotted among the peasantry. The extreme Radicals propose also that a limit should be fixed to the accumulation of land by individuals and corporations. The abolition of the game laws was demanded in no uncertain tone. Mr. Chamberlain struck the key-note of the land question in a series of speeches delivered in the early part of the year, which created a sensation by their socialistic tone. He proclaimed the supreme right of the people to the soil, and referred ominously to the period when "every man was born into the world with natural rights—with a right to a share in the great inheritance of the community—with the right to a part of the land of his birth."

The democracy intend to deal more radically with city property than with agricultural land. They want the landlords to bear a large share of the expense of the great work of providing decent, sanitary, and comfortable dwellings for the artisan population. The great bulk of the ground is let on building leases. The leaseholders have to pay all assessments for public improvements and increased rates and taxes. At the expiration of the lease, the buildings erected revert to the landlord. Mr. Broadhurst brought forward a bill to enable leaseholders to purchase the fee simple of lands on which they have built, capitalized on the basis of the value at the beginning of the lease. Others propose to tax vacant property at the same rate as improved property. Building-leases are almost invariably loaded with troublesome and onerous covenants, which Mr. Broadhurst and his fellow-reformers propose to cancel by act of Parliament. The Government made inquiries through its consular agents with regard to the customs in Continental countries. The replies showed that in all the cities of the Continent of Europe owners usually built on their own property, building-leases being scarcely known, except in Paris, and covenants unheard of.

The General Election.—The results of the earlier polling showed large Conservative gains in the metropolis and Lancashire. The new county electors were attracted by the doctrines the Radicals, and cast their votes against the party of the land-owners. Yet the Liberals were disappointed in their expectation of returning immediately to power with a clear majority over the Tories and Parnellites combined. The result of the Irish elections proved beyond question that the Irish Parliamentary party represents the wishes of the entire Irish people, and gave Mr. Parnell a stronger control than before over the balance of parties in Parliament. The question of home rule was thus made a foremost issue in the next session, but parties were left in a state of unstable equilibrium. The Salisbury Cabinet remained as before, a provisional ministry. The pressure of the demand for home rule would lead to new combinations, which might be favorable or adverse to Irish wishes, might return Mr. Gladstone to power, or firmly establish Lord Salisbury, and might result in the ascendency of the Radicals, or in an era of Conservative reaction. The Liberals in the new Parliament outnumber the Conservatives by 100 outside of Ireland. They carried 244 seats in England, 27 in Wales, and 62 in Scotland, a total of 333. The Conservatives won 220 seats in England, 3 in Wales, 10 in Scotland, and 18 in Ireland, making their total 251. The Nationalists carried 85 seats in Ireland and 1 in England, giving them 86 votes. The Conservatives and Parnellites together had a majority of 4 votes.

The Colonies.—The Gladstone ministry, which took office with the professed objects of curtailing the foreign and colonial responsibilities of the British Government and retrenching the expenditures incident to an imperial policy, did far more than the Disraeli administration to multiply colonial interests and expand the empire, and left to its successors the task of balancing a budget swelled to £100,000,000 by its foreign adventures. Lord Derby, a convinced advocate of the Liberal idea of colonial independence, was, during his direction of the ministry of colonial affairs, repeatedly driven to reverse his decisions and assume new imperial liabilities. The Colonial Council, composed of the Agents-General of the Colonies, has grown into a consultative body on which the Colonial Office depends for advice in all important matters, and goes far to realize the idea of imperial federation. The Liberal Cabinet added to the empire the whole of the native territories of South Africa, excepting the strip on the west coast which they were compelled to concede to Germany. The new British possessions in this quarter include Bechuanaland and the Kalihari region, Basutoland, Pondoland, Zululand, and Amatongaland. On the west coast of Africa the whole lower Niger valley was taken under British protection. In the Pacific a colony started in North Borneo, by a company of British adventurers, was first taken under British protection. After allowing Germany to establish herself in Papua and neighboring islands and annexing 60,000 square miles of the island to the British Empire, the Government yielded to the clamor of the Australians and raised the British flag over Huon Gulf and the small islands directly opposite the new German possessions, an act that intensified the distrust and dislike of Germany toward England, and raised a new diplomatic issue after the discomfitures of the Angra Pequeña, the Cameroons, and the Fiji affairs. The continuation of the railroad over the Bolan Pass completes the absorption of the Quettah and Pishin districts and neighboring territories on the border of Afghanistan. During the Russian dispute Port Hamilton, an island belonging to Corea, was occupied without the permission of the Corean or the Chinese Government, and has been permanently fitted up as a naval coaling-station. It has an area of 5¼ square miles. The conquest and annexation of independent Burmah was left to be accomplished by the succeeding ministry.

The Tories were disappointed in the results of the fair-trade agitation, and were unable to make that question, on which their own party was still divided, a prominent issue in the electoral canvass. The latest protectionist scheme is that of a tariff union with the colonies, combining the idea of retaliation against foreign tariffs and protection of British agriculture and manufactures, embraced in the programme of fair trade, with that of a closer political union with the colonies. Its advocates argue that, while foreign countries have closed their doors against British products and import less and less of them every year, the colonies can, and, notwithstanding their own protective tariffs, do consume increasing quantities of British manufactured goods. They can produce the food and raw materials required in Great Britain, and possess millions of square miles of undeveloped soil for the employment of British emigrants who can no longer find occupation at home. If reciprocity with the colonies were established, it is thought that the great and growing colonial trade would reach a magnitude that would render the commerce of Europe and the United States almost indifferent to British manufacturers. The total imports from British colonial possessions in 1883 amounted to £98,681,505; from foreign countries, £328,210,074; the exports to British possessions, £90,400,921; to foreign countries, £215,036,149. The exports to foreign countries have decreased, since 1873, £24,820,909, and the exports of British and Irish products to foreign countries £32,514,211. During this period the exports to British colonies and possessions have increased £19,253,214, and of the increase £17,149,081 was in British and Irish products. The largest trade is with the great Australian, American, and South African colonies, with a total population of about 10,000,000, mainly of British extraction. The imports from this group of colonies amounted in 1883 to £49,003,425, the exports to them to £45,701,882; the imports from the minor colonies and possessions to £8,622,515, the exports to them to £10,557,174; the imports from India and Ceylon to £41,055,565, the exports to the latter to £34,141,865. Of 150,763,140 cwt. of grain imported into Great Britain in 1883, India furnished 11,248,988, Canada 5,228,066, and Australasia 2,790,152, together 19.267,206 cwt., or 12·1 per cent. of the total. Of 1,734,333,552 lbs. of raw cotton, India sent 260,698,480 lbs., and the British West Indies and Guiana 462,784 lbs., together 15 per cent. of the whole. Of the 495,946,779 lbs. of wool imported, 85·7 per cent. came from British possessions, Australia supplying 351,685,606 lbs., Cape Colony 48,870,981 lbs., and India 24,822,130 lbs. Of the total imports of sugar, amounting to 20,366,627 cwt., 3,382,757 cwt., or 16·6 per cent., came from the British East and West Indies, Mauritius, and Natal. Of 6,609,942 loads of wood, 1,534,565, or 23·2 per cent., came from British North America. Of 222,262,431 lbs. of tea, India supplied 59,252,436, or 21·1 per cent.

The cost of the colonies to Great Britain is about £2,000,000 a year, more than half of which is expended on the nine general naval and military stations.

The extent, population, revenue, expenditure, commerce, and navigation of the colonies and dependencies of Great Britain, as far as reported, are given in the following table:

POSSESSIONS.	Area, sq. miles.	Population.	THOUSANDS OF POUNDS STERLING.					Navigation, thousands of tons.
			Revenue.	Disbursements.	Debt.	Imports.	Exports.	
Heligoland	¼	2,001	..	..	..	..	..	..
Gibraltar	1⅞	18,381	48	53	..	..	..	9.541
Malta	119	154,256	206	184	390	22,751	21,951	9,619
Total Europe	125⅛	174,638						
Cyprus	4,200	186,084	194	112	..	385	319	345
India	877,959	201,888,897	70,125	69,418	..	65,549	84,527	7,072
Ceylon	24,702	2,763,984	1,162	1,146	2,124	4,529	3,831	3,427
Straits Settlements	1,445	480,000	559	602	63	18,808	18,765	5,896
Hong-Kong	32	160,402	269	280	..	..	..	6,882
Andaman Islands	2,508	14,628	..	..	..	..	..	..
Nicobar Islands	684	5,500	..	..	..	..	..	..
Labuan	30	6,298	5	5	..	77	82	47
North Borneo	22,009	150,000	..	..	..	..	..	..
Aden	66	34,711	..	..	..	..	..	..
Perim	5	50	..	..	..	..	..	..
Total Asia *	934,048	205,690,659						
New South Wales	309,175	869,310	7,675	7,418	30,132	20,960	19,886	..
Victoria	87,884	931,790	5,934	5,786	28,325	17,743	16,398	..
Queensland	668,224	287,475	2,566	2,511	16,570	6,233	5,276	882
South Australia	903,425	308,777	2,009	2.370	15,511	6,310	4,883	..
Western Australia	975,920	31,700	284	240	861	516	447	388
Tasmania	26,375	126.220	562	533	2,385	1,832	1,731	418
New Zealand	104.403	540,877	3,529	3,681	29,574	7,974	7,095	1,002
Fiji Islands	8,034	129,894	107	88	254	451	352	138
Rotumah	14	2.680	..	..	..	..	..	..
New Guinea and adjacent islands	85,330	137,500	..	..	..	..	..	..
Total Australasia †	3,168,784	3,671,523						
Cape Colony and dependencies	242,734	1,249,824	5,443	6,342	20,811	6,681	4,834	1,853
Natal	18,750	418,731	620	760	2,554	1,751	832	464
Sierra Leone	1,000	60,546	66	77	63	434	442	387
Gambia	69	14,150	29	24	..	218	208	161
Gold Coast	600	408,070	106	99	..	383	364	397
Lagos	73	75,270	51	38	..	515	594	390
St. Helena	47	5,059	10	11	8	56	14	119
Mauritius and dependencies	1,025	359,322	889	838	754	2,766	3,830	646
Ascension	34	27	..	..	..	..	..	..
Zulu Reservation	2,280	..	..	..	..	..	..	..
Bechuanaland	184,500	..	..	..	..	..	..	..
Walfish Bay	480	..	..	..	..	..	..	..
Total Africa ‡	251,592	2,590,999						
Dominion of Canada	3,470,392	4,824,810	7,667	8,938	33,014	27,553	20,485	7,973
Newfoundland	40,200	196,411	261	258	323	1,902	1,471	630
Bermudas	19	16,096	31	33	5	239	91	226
Honduras	7,562	27,452	52	40	..	269	303	210
Bahamas	5,390	43,521	52	55	49	233	148	260
Turks Islands	9¼	4,732	10	8	..	25	33	229
Caicos Islands	213	1,878						
Jamaica	4,193	580,804	594	548	1,258	1,592	1,469	805
Cayman Islands	225	2,400	..	..	..	..	..	..
Leeward Islands	706	122,628	116	115	66	457	574	1,117
Windward Islands	664	146,340	176	276	48	1,676	1,769	1,648
Trinidad	1,754	155,532	458	464	599	2,663	2,687	931
British Guiana	85,425	260,011	478	459	312	2,225	3,172	642
Falkland Islands	4,839	1,583	8	9	..	53	85	27
Barbadoes	166	171,860	..	..	..	..	..	..
Total America	3,621,757¼	6,056,058						
Total British possessions	7,976,307	218,183,877						

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* Not including the Kuria Muria Islands, Mosha, Kamaran, and Keeling Islands, the total area of which is less than one hundred square miles.

† Not including the Chatham Islands, Norfolk Island, and the islands of Auckland, Lord Howe, Caroline, Starbuck, Malden, and Fanning. The natives of Australia, estimated at 55,000, and the Maoris of New Zealand, numbering 44,000, are not included.

‡ Not including Tristan da Cunha, New Amsterdam, and St. Paul, nor the annexed Niger districts, the occupied district on the Red Sea coast, and the protectorates established on the southeast coast, extending from Port Elizabeth to Delagoa Bay.

GREECE, a kingdom in southeastern Europe. The legislative authority resides in a single Chamber. The deputies are elected by universal suffrage for four years. Voting is by ballot. Deputies are paid. The reigning King is Georgios I, son of the King of Denmark, born Dec. 24, 1845, and elected King of the Hellenes in 1863, after the expulsion of Otto.

Area and Population.—The extent of the kingdom, including 5,170 square miles in Thessaly, ceded by Turkey in 1881, is 25,111 square miles; the number of inhabitants, according to the latest enumeration, 1,979,453. The population increased between 1870 and 1879 at the rate of 1·87 per cent. per annum. The number of births in 1882 was 43,157; of deaths, 32,194; of marriages, 11,186. Athens, the capital, had 84,903 inhabitants in 1884.

Commerce.—The total value of the imports in 1883 was $27,267,000; of the exports, $18,572,000. The principal imports were cereals, of the value of $5,200,000; and textiles, of the value of $6,200,000. The chief article of export is currants, valued in 1883 at $9,644,000, after which come olive-oil, lead, and wine.

The merchant navy in the beginning of 1885 contained 74 steamers, of 33,318 tons; and 3,164 sailing-vessels, of 239,361 tons; besides 6,000 coasting-vessels. The tonnage that entered the Piræus in 1883 was 1,558,430 tons, of which 532,359 tons were Greek, 338,780 Austrian, and 126,566 British.

The exports to the United States amounted to $920,492 in 1884. They consisted almost exclusively of currants, of which 13,114 tons were shipped to the United States in 1884. The direct imports from the United States were confined to the petroleum imports now made on government account.

The land is held principally by a few great proprietors. The wheat product in the older portions of the kingdom is about 34,000,000 bushels; the Indian-corn product, 21,700,000 bushels. A large part of the surface is planted to the Zante currant. The rich district of Thessaly, annexed in 1881, produces 21,700,000 bushels of wheat and large crops of oats and barley.

Railroads.—The length of railroads open to traffic in 1884 was 107 miles. In 1882 a scheme was adopted for the construction of 435 miles of railroads. Lines in Thessaly, and parts of lines from Athens to Corinth, and from Corinth to Patras, and to Nauplia, have been built. The line from Athens to Laurium, where the lead-mines are situated, 37 miles in length, was completed in June, 1885.

Posts and Telegraphs.—The post-office forwarded 3,275,662 inland and 1,738,298 foreign letters in 1882. The telegraph lines, including cables, had a length of 3,720 miles at the end of 1884. The Eastern Telegraph Company has laid submarine lines between the most important islands and the mainland, and between Patras and Corinth.

The Isthmus of Corinth Canal.—Not much work was done on the canal, begun in 1882, until the beginning of 1885, when large dredging-machines were set in operation. The length of the cutting is four miles, the estimated cost $5,000,000.

Army and Navy.—By the laws of 1879 and 1882 universal liability to military service was established. Active service for one year in the infantry and two in the special corps is required. The budget of 1884 provided for a total force of 30,692 officers and men, with 3,474 animals and 64 guns. The war strength is 72,257 men of all ranks. The four battalions of field-artillery are provided with Krupp guns; the infantry is armed with the Gras rifle, and the cavalry with the Gras carbine.

The navy consisted in 1885 of a small ironclad corvette and an armored gunboat, two unarmored corvettes, two gunboats armed with 26-ton guns, and nine smaller ones, nineteen torpedo-boats, a torpedo depot-ship, besides torpedo-launches, transports, gunboats in sections, and other vessels. There were building four coast-guards and six cruisers. The construction of four ironclads of 5,000 tons' displacement was authorized. For additions to the fleet, 40,000,000 francs of the loan of 1883 were set aside. The navy was manned in 1885 by 2,610 officers and men.

Finances.—The estimated revenue for 1884 was 86,122,950 drachmas or francs, of which 9,315,000 were derived from direct taxes, 23,500,000 from indirect taxes, and the rest from royalties, national property, and other sources. The estimated expenditures amounted to 85,814,598 francs, of which 23,009,043 francs were required for interest on the internal debt, and 20,216,109 francs were devoted to military purposes. There has been a deficit nearly every year since the establishment of the kingdom. During the ministry of Trikoupis the deficit for three years was 37,000,000 francs. The foreign debt consists of old loans amounting to 40,007,432 francs. The internal debt amounted in 1884 to 487,268,429 francs, not including a loan of 20,000,000 francs authorized for roads in 1882, one of 12,000,000 francs for railroads in Thessaly, the Hellenic portion of the Ottoman debt, and other liabilities that swelled the total to about 700,000,000 francs. The latest loan was issued in 1883 and 1884, for the amount of 170,000,000 francs. To cover the expenses of mobilization in the Balkan crisis of 1885 a loan of 100,000,000 francs was authorized in December.

The operation of resuming specie payments was successfully effected in 1885. To meet the augmented expenses of the Govenment, taxation was greatly increased, and a new customs tariff went into force Dec. 1, 1884, which increased largely the duties, particularly on luxuries; though on machinery, manufactured metals, and other articles of utility, the rates were lowered. The Government, on Feb. 13, 1885, assumed a monopoly of petroleum, in order to put a stop to smuggling. Cigarette-paper, playing-cards, and matches were also made Government monopolies. In order to insure the collection of tobacco duties, the cutting of tobacco was intrusted to official cutters, and a charge of three francs per oke collected, besides forty centimes for stamps. The new taxes produced much less than was estimated, and the financial year 1884–'85 closed with a large deficit, the receipts amounting to 71,300,000 drachmas, and the expenditures to 90,306,792 drachmas.

Change of Government.—On Feb. 17 the Opposition took advantage of the absence of a number of ministerial delegates to pass a vote of censure. The Trikoupis ministry thereupon offered their resignations, and Delyannis treated with the King regarding the formation of a ministry. The King was opposed to the dissolution of the Chambers, Delyannis could not accept office with a majority against him, and Trikoupis would not retain office without an appeal to the country. The difficulty was arranged by the ministers resuming their portfolios and dissolving the Chambers.

The general election was held in April, and resulted in the return of only 85 Ministerialists, in a Chamber of 244 members. Instead of waiting, as was formerly the practice, until the Chamber formally deposed the ministry by electing a hostile Speaker, Trikoupis resigned at once, and Delyannis was called upon to form a Cabinet. The Trikoupis ministry lasted three years, while the duration of previous administrations averaged as many months. The cause of the unpopularity of Trikoupis, notwithstanding his successful management of the finances and his high reputation for political honesty, was the imposition of a tax on wine and spirits and the monopolies of petroleum and tobacco. The new Cabinet was composed of former associates of Coumondouros. T. Delyannis, the Premier, had previously held the portfolios of Foreign Affairs and Finance. Papa Michalopoulo was appointed Minister of the Interior; Antonio Mavromichalis, Minister of War, a post which he had held under Coumondouros; Antanopoulo, Minister of Justice; Romas, Minister of Marine; and Zygomalos, Minister of Education.

Legislation.—The programme of the new ministry was confined to the repeal of the monopolies and measures of retrenchment to make up the loss of revenue. The legations were suppressed, and all the ministers to the European courts were recalled. On July 24 a bill was passed regulating the tobacco duties and abolishing the monopoly in that article. The monopoly in the manufacture of cards, cigarette-paper, and matches was abolished, but the repeal of the petroleum monopoly was postponed. The tobacco duty was reduced from three and a half to two drachmas per kilogramme, the wine duty was lessened one half, and the duty on petroleum from 10 to 7 per cent. ad valorem, while an income-tax was introduced, the tax on the profits of joint-stock companies was raised from 3 to 5 per cent., and the stamp duties were increased. Retrenchments to the amount of 11,000,000 drachmas were proposed in the budget.

Military Preparations.—The Roumelian revolution deranged the financial plans and prospects of the Government. The Greeks had been excited in the earlier part of the year by the ferment in Macedonia, and the difficulties between the Cretans and their governor. The Greek Government took the same ground as King Milan with regard to the union of the Bulgarias, and the Greeks were not less eager for action than the Servians. The mobilization of the army and navy was determined upon, and partially effected. The forces on the Turkish frontier were greatly strengthened. To provide means for mobilization and for large quantities of war material ordered abroad, a temporary loan was obtained, and the forced paper currency was reintroduced. In reply to remonstrances from Great Britain, France, and the other powers, Delyannis said that the Bulgarian union would absorb thousands of Greeks, and recalled the fact that for the sake of preserving peace Greece had lost part of Epirus and Thessaly, which was given her by the Berlin Treaty. The decree calling out the reserves was issued Oct. 11, and within five days 30,000 men were enrolled. The Minister of Marine resigned, and was succeeded by M. Bouboulis. Owing to a disagreement with the Minister of War regarding the length of service, the Ministers of Education and Justice resigned, M. Kontoraulis replacing the latter, and also taking charge of the Ministry of Education provisionally. On Nov. 10, after the reassembling of the Chamber, a war credit of 22,000,000 drachmas was voted, and one for 5,600,000 drachmas a few days later. A new advance of 19,000,000 drachmas was obtained from the National Bank, and subsequently 16,000,000 drachmas more were raised in the same manner.

The American School at Athens.—The American School for Classical Studies has been presented by the Government with a building-site on Mount Lycabettus.

GUATEMALA, a republic of Central America. Of its population, 1,276,961 in February, 1884, 951,824 are pure whites, and the remaining 325,137 mixed and aborigines.

The republic covers an area of 121,140 square kilometres; it has four seaports, viz., San José de Guatemala, Champerico, and the Bay of Ocós on the Pacific side, and on the Atlantic the port of Livingston, which is a free port for the importation of merchandise. Another port is to be added, Puerto Barrios, on the Bay of Santo Tomás, so soon as the work on the Northern Railway has progressed sufficiently. Besides these there are the landings or smaller ports of Bar of the Rio de los Esclavos, Tecojate, and San Luis on the Pacific, and Panzós on Potochie river (Alta Verapaz), which flows from Lake Izabal, and Gualan, on Montagua river, which flows near the southern boundary into the Caribbean Sea.

Government.—The President of the Republic is Gen. Manuel Lizandro Barillas. The Cabinet was composed of the following ministers: Foreign Affairs and Public Instruction, Don Angel María Arroyo; Interior and Justice, Don Manuel J. Dardon; Finance and Public Credit, Don Antonio Aguirre; Public Works, Don Enrique Martinez Sobral; sub-Secretary of War, Don Próspero Morales, the President being Minister of War *ad interim.*

The Minister to the United States is Señor L. A. Bátres; the Consul-General at New York, Señor J. Baiz. The United States Minister to the Central American republics collectively (resident in the city of Guatemala) is the Hon. H. C. Hall.

Army.—The strength of the regular army is 2,180 men, and that of the militia is 33,229. Expensive armaments and defalcations to a considerable amount, of which the ex-Minister of War Barrundia was accused, detected after he had quitted office, had reduced the available funds of the Government to a low ebb at the time the new administration was installed, while the interruption of business generally, inseparable from a state of war and uncertainty, also caused embarrassment to the banking institutions of the country. Hence President Barillas in April authorized the Banco Internacional, Banco Colombiano, and Banco del Occidente to suspend specie payments for the rest of the year. The Government issued some paper money, but soon determined to withdraw it again from circulation at the rate of $10,000 monthly, and instead procure a local loan of $500,000. On Aug. 1 the Government suspended for one year to come the payment of interest on the internal and foreign debt, including the coupons on railroad bonds.

Finances.—On Jan. 1, 1885, the national indebtedness stood as follows:

Home debt	$4,601,888
Foreign debt	4,103,693
Total	$8,705,581

The revenues and expenditures in 1884 were as follow:

INCOME.	
Balance	$114,999
Direct taxes	159,794
Indirect taxes	3,111,315
Monopolies	1,387,307
Government income	330,441
Sundry income	112,619
Deposits	3,052,472
Total	$8,318,947

OUTLAY.	
State Department	$2,413,976
Post-Office and Telegraph	127,493
City police	152,540
Department of Justice	2,863
Pensions and state aid	49,468
Charitable institutions	135,118
Municipalities	5,495
Tobacco purchases	2,287
Saltpeter purchases	4.674
Sundry expenditures	1,933,930
Home debt	3,288,706
Total	$8,116,550

Commerce.—The imports and exports for five years have been as follow, in thousands of dollars:

	1880.	1881.	1882.	1883.	1884.
Import	3,036	3,665	2,655	2,031	3,282
Export	4,425	4,084	3,719	3,719	4,938

The chief export articles in 1884 were: Coffee, $4,455,677; hides and skins, $157,775; sugar, $151,827; indigo, $7,883; wool, $9,253; and India-rubber, $52,203. The American trade with Central America is shown in the following table:

FISCAL YEAR.	Import into the United States.	Domestic export from the United States.
1885	$6,409,015	$2,667,943
1884	6,161,227	3,064,798
1883	5,121,315	1,936,813

There entered the ports of the republic, in 1884, 272 vessels.

The financial decree of Oct. 28 revokes the previous decree of July 31, and stipulates: 1. All privileges that certain treasury notes enjoyed under the decree of July 31 are herewith canceled, and they are from date assimilated to all other issues thereof. 2. All payments of duties and taxes due the Government will henceforth have to be made in cash. 3. Revenues from state property, and all other sources, will from date be applied in preference to the payment of arrears of salaries; the balance will be placed at the disposal of the Minister of Finance, who will cause the treasury first to make therefrom the most urgent payments that the service of the state may require.

A Free Port.—On Sept. 15 Ocós was thrown open to traffic as a free port, in conformity with decrees of June 27 and Aug. 31, the freedom from duties being limited to the free zone extending from said port inland. All wines and liquors consumed within the latter were also relieved of taxes. But the following goods were prohibited as articles of import: apparatus for coining money; balls and bullets of iron and lead, shells, grenades, cartridges, any other projectiles of war, guns and field-pieces, carbines, rifles, and muskets, and other firearms, obscene books and pictures, nitro-glycerin, powder, and other explosives. Merchant vessels calling at the port will pay neither anchorage, tonnage, nor register dues.

Tariff Revision.—The import duties by decree of Jan. 29 had been raised 10 per cent., and on June 2 another decree raised them 10 per cent. additional, but the reduction of the duty by one half on green fruit, soda, soap, chinaware, flour, stearine, and canned provisions, which had been decreed on Jan. 29, simultaneously with the enhancement on other goods, was maintained in force on June 2. On July 31 a third raising of the import duties was decreed, stipulating—1. The goods enumerated under article 17 of the tariff are, dating from Aug. 1, raised from 25 per cent. ad valorem, hitherto levied thereon, to 50 per cent. 2. The goods enumerated under articles 18, 19, and 20, of the same tariff, will in future pay 75 per cent. ad valorem. 3. The goods enumerated under article 16 remain as there stipulated, and the exceptions under article 15 remain in force. 4. One half of the duties is to be payable within three months of appraisement, and the remaining half within six months. All enhancements of the rates of duties decreed between June 19, 1879, and this date, are herewith revoked.

A decree was issued on Oct. 23, again raising the duty on imports, fixed by decree of July

31, 20 per cent., this additional duty to be collected on goods arriving by steamer from Dec. 15, 1885, and by sailing-vessel from Feb. 1, 1886. The additional 20 per cent. is to accrue in cash to the International Bank, which will pay with such funds the creditors of the state.

Education.—There were, receiving gratuitous instruction, in 319 primary schools in the eight departments of the central section of the republic in 1883, 19,272 pupils, taught by 465 teachers at an expense during the year of $122,698; in the eastern section there were 205 schools, 8,903 pupils, 212 teachers, and the annual expense was $38,159; in the western section, embracing eight departments, the number of schools was 326, of pupils 11,647, of teachers 360, and the expenditure $69,693; there were consequently altogether 850 schools, 39,642 pupils, 1,037 teachers, and the aggregate expenditure defrayed by the state in that year was $241,500. Of private primary schools there were 55, with 193 teachers, and 1,870 pupils; the expense was $84,154.

There were five schools devoted to secondary instruction, with 707 pupils and 81 instructors, at an annual expense of $79,528, toward which the state contributed $51,583. Of professional institutes, such as law, medicine, and engineering, there were four, with forty professors and 133 students; the annual expenditure being $24,904. There were five special schools, one being devoted to the teaching of music and declamation, one to commerce, one for deaf and dumb, one school of design, and one in which mechanics and the fine arts are taught. In these there were twenty professors; the total number of pupils was 242, and the aggregate expense $21,726.

Railroads.—In June the Government made a contract for the building of a railroad from La Antigua to a point between Palin and Amatitlan, or to either of these towns. Another contract was made in September, for the completion of the Northern Railroad of Guatemala, for a term of ninety-nine years, on the expiration of which it is to become national property, with all its rolling-stock in a complete state of exploitation. During twenty-five years from the day it goes into operation, no other line shall be allowed to be operated between the capital and the Atlantic coast. The Government pays the company a subsidy of $10,000 on every mile between Puerto Barrios and the capital, in sections of ten miles, as they are completed. The Government grants the company 4,000 caballerias of vacant lands, half of which are in the department of Peten and the remainder are on the line; all railroad material to enter duty free as long as the line is building and continues in operation, with freedom from all taxation, and gratuitous use of the national telegraphs and post-offices.

Steamship Service.—In July the Government made a contract with the firm of Anderson & Owen, agents of the British Honduras Royal Mail Steamship Company, to the effect that the steamers of this line touch three times a month at the port of Livingston, the steamers to take gratuitously the correspondence for Puerto Cortés, Balize, New Orleans, and New York, and pass free to New Orleans the agents and employés of the Government.

There was, furthermore, in July, a project on foot to subsidize lines of steamers on the Atlantic and Pacific, provided the other republics were willing to contribute their share. It was estimated that monthly net earnings of two per cent. could be realized on such lines, if they were economically managed.

Events of 1885.—The idea of cementing the five comparatively small and weak Central American republics into a strong Union is by no means novel, nor is it believed to be unpopular. The geographical importance of this narrower portion of the New World, since the advent of steam and electricity, and since a canal is being dug at a point where the two oceans approach each other nearest, has been gaining steadily, and so has its strategical and commercial importance. Hence the interest attaching to movements initiated to bring about such Union. Central America separated from Mexico in July, 1823, and a confederation of the five states was formed. This existed until 1839, when the federation was dissolved, and each state adopted an independent government. Since then the history of Central America has been written in blood. Wars and revolutions have been plentiful. Bold and ambitious men have risen up like mushrooms in a night. They have gathered around them followers as bloodthirsty and desperate as themselves, and the result has been anarchy and rapine. On Sept. 15, 1875, Guatemala invited the four sister republics to re-establish the Union and bring back the days of harmony and prosperity. The proposition was favorably received at first, but local considerations and ambitions prevented the plan from being realized. Meanwhile the master spirit of Guatemala, who had been the promoter of the idea, Gen. J. Rufino Barrios, President of that republic, was not discouraged, but resolved to rule the country under his charge so well, and raise it morally and materially to such a degree of superiority, that it should be a model among Spanish-American republics, and in this he succeeded.

Preparatory to his Central American Union scheme, and in order to prevent, as he thought, Mexican intervention, he settled the frontier question pending between that country and Guatemala in 1882, by making liberal concessions. He next made friends of the Presidents of Honduras and Salvador, and had interviews with them.

Under date of Feb. 28, 1885, he issued the following proclamation:

ARTICLE 1. The chief of the Republic of Guatemala proclaims the union of Central America as one republic, and initiates, protects, and sustains all workings, operations, and movements, to effect the same, and for such purpose assumes the title of Supreme Military Chief of Central America, and the command of all its forces, until he succeeds in uniting these sections into one single nation and under one flag.

2. The chief of the republic will receive the adhesion of the governments, people, and officers, who, upon the terms established in this decree, will join the cause of the Union.

3. A General Assembly, composed of fifteen delegates from each of the states, elected by popular vote, with the greatest liberty and independence, from among the persons who, in conformity with the respective laws, can act as public representatives, will assemble in the city of Guatemala on the 1st day of May next, to decree the political constitution of the Republic of Central America, and determine the manner, time, and form of the election of a President, the term of service, the date when he shall assume supreme constitutional power, and designate which city in Central America shall be the capital and seat of government.

4. Any person of official or private character who opposes the Union or hinders its operations or workings, embarrassing them in any way, will be considered a traitor to the great national cause, and deprived of eligibility to any public position in the Republic of Central America, and will be liable to the consequences and responsibilities accruing therefrom, according to the nature of his actions.

5. All the inhabitants of the republics of Central America are exhorted to declare in favor of the Union, and Guatemala joins them at once in the common cause, any authority resisting the same being disavowed.

6. The chiefs and high officers of the Central American militia, who declare themselves for the Union, offering their services for the realization of this patriotic object, will merit promotion in the army of the Republic of Central America, and should they already have reached the highest grade, they will, in that case, be decorated with a gold medal superscribed to commemorate the event.

7. Those lower officers and soldiers who may distinguish themselves by valor and actions will receive, besides promotion, recompense, which in due time will be awarded for services.

8. The flag of the Republic of Central America, which will be adopted from this date by the defenders of the Union, will be blue and white, the colors to be placed in three vertical stripes, that of the center to be white, the two outer stripes to be blue. The white stripe will bear the coat of arms—a quetzal (bird) resting upon a column—with the following inscription: "Liberty and Union, 15th September, 1821—28th February, 1885."

9. No negotiations regarding territory, neither international treaties nor foreign, nor national loans, nor any transactions of an analogous nature, which may be concluded by any of the other states of Central America after the date of this decree, will be recognized.

10. The Secretary of Foreign Affairs is empowered to communicate this decree to the Assembly, to the governments of Central America, and to those of America and Europe with whom friendly and commercial relations exist.

11. The Secretary of the Interior and Justice will attend to all that may be required for the installation of the General Assembly of the states.

12. The Secretary of War will see to the carrying out of whatever may further be necessary for the execution of this decree.

About the subsequent defection of Dr. Zaldivar, the President of Salvador, and the effect it had on President Barrios, a Honduras officer, who was at the time on a mission to the Guatemalan headquarters, gave the following information: "When President Barrios issued his famous 'Union decree,' he was certain of the alliance of Salvador and Honduras. His dear friend Zaldivar menaced Gen. Bogran, of Honduras, and against his own will the latter was compelled to adhere to the decree. When the decree was issued, Zaldivar sent Barrios a dispatch which stated his full and complete concurrence in the decree, and congratulated him on the certainty of the speedy realization of his patriotic aspirations. It is possible that up to that moment Zaldivar tried to be sincere, but he soon discovered that the wealthier portion of his fellow-citizens were bitter against the Union movement. He then began to think about retracing his steps, and prepared for war. He enlisted the sympathies of Mexico, and entered into an alliance with Nicaragua and Costa Rica. Meanwhile he burdened the wires with friendly messages to Barrios, and that chieftain, confident in the integrity and honor of his lifelong friend, quietly awaited information as to how his decree was received by the outside world, and by Nicaragua and Costa Rica. As far as the two latter powers were concerned, he was soon undeceived. They indignantly refused to concur in this movement, and declared war against Guatemala. Then the slumbering lion was aroused, and Barrios ordered the march of his force to the frontier of Salvador; but up to the 9th of March he still confided in Zaldivar. While preparing to join forces, Barrios received a menacing telegram from the Mexican President. He read it carefully two or three times. Those who were with him noticed that he seemed bewildered, for he passed his hand over his eyes several times, as though he distrusted his very eye-sight. He then crushed the telegram into his vest-pocket, and wrote a dispatch which was immediately sent to Zaldivar. While awaiting an answer, he walked rapidly up and down the room, while his officers and ministers stood respectfully by, but none dared to address him. At last Zaldivar's answer came. It breathed defiance and hatred. Barrios held the dispatch a moment in his hand, then threw it on the floor, stamped upon it, and said: 'Gentlemen, Zaldivar has played the traitor. He has entered into an alliance with Mexico, Nicaragua, and Costa Rica. His defection has complicated the problem. I must have time to deliberate with myself what to do. Please leave me for a few moments.' The officers and ministers left him, and he remained for two hours closeted with Barrundia, the Minister of War. From that moment it is probable that even the Union movement was a secondary consideration with him, while vengeance toward Zaldivar became the ruling sentiment of his heart."

On March 16 Secretary Bayard sent to Senator Miller, chairman of the Senate Committee on Foreign Relations, a letter explaining the treaty obligations of the United States in Central America, and closed by saying:

In response to the invitation of your committee that I submit such suggestions in the premises as I desire to make, I can only express my conviction that, while this Government has an undoubted interest in the assimilation of the aims of the Central American states, so that they may act voluntarily and harmoniously together under republican forms toward the realization of national and continental ends, it must inflexibly refuse its countenance to any measures subversive of the free autonomy of any of the several states. The interest and duty of the United States in the affairs of the Central American states, and which, so far as existing treaty obligations are concerned, I have already recited, must be manifested in accordance with the historical and consistent policy of this nation toward the states of the American system. Believing that the moral influence and good offices of the United States can be made a potential agency in the preservation of peace within the line of this policy, I am unable to suggest any action of the Senate.

On the following day Secretary Whitney sent the ensuing dispatch to Commander Mahon, of the "Wachusett," at Panama:

> President Barrios, of Guatemala, has proclaimed a union of the states of Central America, and announced himself as the commander-in-chief of the combined military forces of those states. The Governments of Nicaragua, Costa Rica, and San Salvador have determined to resist this forcible attempt of President Barrios to become dictator of Central America, and, as hostilities are likely to take place which will endanger the lives and property of the citizens of the United States, you will proceed with the vessel under your command to La Union and La Libertad, San Salvador, and such other points on the coast of Central America as you may deem advisable, in order to protect American interests.
>
> Place yourself in communication with our minister to the Central American states and our consuls at the several ports, and obtain all the information possible in relation to the existing condition of affairs.
>
> It is stated that attempts have been or will be made by emissaries of the Government of Guatemala to interfere with the submarine cables of the Central and South American Telegraph Company. Protest against any attempt to cut the cables or interfere with their use, and in general use all proper measures to prevent injury to the property of American citizens. Take all possible precautions to protect the health of your officers and men, particularly from yellow fever and other diseases which would render it necessary for you to leave that coast, where your presence is now very necessary.

The Mexican Minister of State and Foreign Affairs, as early as March 10, sent a note through the Mexican minister at Guatemala, couched in moderate and polite yet decidedly threatening terms, saying that, however Mexico might regret doing so, in order to defend its frontier and prepare for all emergencies, it would have to take such military steps as its interests might call for. On March 18 Gen. Alatorre was ordered to join his force of 8,000 men, with 7,000 troops in the State of Michoacan, and proceed to the State of Chiapas, bordering on Guatemala. Meanwhile Gen. Barrios marched to the frontier of Salvador with 16,000 troops and 38 field-pieces and intrenched himself. On March 30 an advance was ordered under the command of Gen. Francisco Menendez, who attacked the forces of Salvador under Gen. Monterrosa, 10,000 men, at "El Coco," and after a short resistance the latter fell back upon Chalchualpa. The same night the Guatemalans made an unsuccessful attack on the position of San Lorenzo, and repeated their onslaught the next day, with no better result. On April 2 Gen. Barrios resolved to renew the attack personally at 9 o'clock A. M., but at 10 no advance movement had been made, as the troops were under the command of an unpopular colonel, and refused to obey him. Barrios was in his tent with two of his officers when this information was brought him. On the refusal of both these officers to assume command, he left the tent, and while he was proceeding to the front of the column he was shot dead by a sharp-shooter from a tree. Meanwhile the battle had begun, and in a short time both sides withdrew from the field, but not until a successful effort had been made by the Guatemalans, with a loss of twenty lives, to recover Barrios's body. Gen. Venancio Barrios, son of the President, was also killed on the same field, together with 1,600 of his companions.

When the news of the President's death arrived in Guatemala, Congress immediately canceled the decree of Feb. 28, and Zaldivar was requested by telegraph to consent to an armistice, which he declined. Meanwhile the Costa-Rican contingent, 500 men strong, reached Corinto from Puntarenas by water on April 4, and Honduras was invaded by the Nicaraguan contingent, under the command of Dr. Cárdenas, President of Nicaragua.

On April 14 the bases of peace were finally arranged between Guatemala and Salvador, a general amnesty was proclaimed, and a definitive treaty was to be drawn up at Acajutla.

At Guatemala the Vice-President, Gen. Barillas, assumed the duties of his predecessor, Barrios, and although martial law was decreed as a matter of form, nothing occurred thenceforward to disturb the peace of the republic. President Barillas received on April 21 a telegram from President Zaldivar, in which he proposed the very thing on account of which he had risen in arms against Barrios, the formation of a Central American Union, proposing that representatives of the five states should meet at Santa Tecla, Salvador, on May 15, each republic to send five delegates! The answer from Guatemala was that, as the presidency was held provisionally, and the next presidential election would have to be prepared for, Gen. Barillas did not deem the moment opportune for a movement of the kind, and that he would look upon it as premature; that in fact nothing could be done till March 1, 1886, when the new President would have been elected, and the Legislative Assembly meet. As at the same time it was not at all likely that Nicaragua and Costa Rica had suddenly changed their views on the subject, and Zaldivar was well aware that, after thwarting Barrios's scheme, he was supremely unpopular in Honduras, he bethought himself that probably his career as a public man in Central America was ended, and that the best he could do would be to leave the country, rich as he was, with his wealth safely invested abroad. This plan he carried out at once, delegating the presidency to Gen. Figueroa. No sooner was Gen. Figueroa installed, than Gen. Menendez, a Salvadorian, one of Gen. Barrios's generals, took up arms against him, at the head of the revolutionary forces he had mustered in Salvador. On June 14 the opposing armies met at Alpaneca, and the force of Gen. Menendez was victorious, capturing the next day the important town of Chalatenango, while simultaneously Gen. Rivas was equally successful at Cojutepeque, Gen. Miguel Brioso, in the opposite ranks, being killed, and Gens. Parrillas and Monterrosa made prisoners. On June 21 Gen. Lisandro Letona capitulated, with other high officers, at Amachapan, and the Nicaraguan forces, after having been repeatedly defeated, were vanquished at Santo Domingo, and returned to their country, the Costa Ricans having gone home long before without firing a shot.

H

HAWAIIAN ISLANDS, a group of islands in the Pacific Ocean, lying midway between California and New Zealand, and transected by the Tropic of Cancer, inhabited by the brown Polynesian race, and organized as a limited monarchy. The House of Nobles, appointed by the King, and 28 elected representatives form with the ministers the Legislative Assembly. The reigning monarch is Kalakaua I, born in 1836, elected King by the Legislature in 1874.

The foreigners elect one half of the representative members of the legislative body. The ministry is composed as follows: Minister of Foreign Affairs, W. M. Gibson; Minister of the Interior, Charles T. Gulick; Attorney-General, P. Neumann; Minister of Finance, J. M. Kapena. The parliamentary proceedings are conducted in either the native language or in English.

The area of the islands, eight in number, is 6,677 square miles. The population, according to the census taken Dec. 24, 1884, was 80,578, of whom 51,539 were of the male, and only 29,039 of the female sex. The population was composed of 40,014 natives, 17,939 Chinese, 17,335 whites, 4,218 métis, and 1,072 Japanese and others. Of the white population, 2,066 were Americans, 1,282 English, 1,600 Germans, 192 French, 9,377 Portuguese, 778 of other nationalities, and 2,040 born in the country. The number of immigrants in 1884 was 7,654, of emigrants 4,941. The capital, Honolulu, contained 20,487 inhabitants.

The increase in the population of the islands since the census of 1878 was 22,593. The native population during the same period decreased from 44,088 to 40,014. The Chinese increased from 5,916 to 17,937, the Portuguese from 436 to 9,377, showing an increase in both classes of laborers of nearly 21,000. There was an increase of 790 in the American colony, 399 in the British, 111 in the French, and in the German 1,328, while other foreign nationalities besides the above increased 1,186, the Hawaiians of foreign extraction 1,093, and the half-castes 798. The decrease of the native population is caused by small-pox and other contagious diseases introduced by foreigners. The worst scourge of late years is leprosy, which was first brought to the islands about forty years ago. The leper settlement at Molokai constantly contains about 1,500 victims in various stages of the disease. To combat the fearful rate of mortality, the Government makes more liberal expenditures for the public health in proportion to its resources than that of any other nation.

Finances.—The receipts of the treasury for the year ending March 31, 1885, amounted to $1,487,890, of which $520,086 were collected from customs, $307,300 from the revenues of the Interior Department, $355,114 from internal taxes, $184,600 from a loan; and the remainder from fines, fees, stamps, sales of Government property, and other sources. The total expenditures were $1,476,033, of which $538,546 was disbursed in the Interior Department; $329,372 in the Finance Department; $143,062 in the Attorney-General's Department; $106,613 in the Foreign Department; $119,491 in the Health Bureau ; $64,046 for the civil list, and the remainder for other purposes. The public debt amounted on the 31st of March, 1884, to $898,800. The Government was authorized by the law of Aug. 5, 1882, to borrow in the course of the ensuing three years the sum of $2,000,000 at 6 per cent.

The Mexican dollars were exchanged for gold at par formerly by common consent among the people, the bankers, and the Government. But when $1,000,000 of the new Kalakaua dollars were coined, banks began to ask a premium, which rose to 8 per cent. The Legislature then passed a law to enable the Government to redeem and sell for bullion all coins in circulation except United States gold and silver pieces, and Hawaiian silver, appropriating $150,000 to cover the loss. The Government silver certificates were made redeemable in gold. The act went into force Jan. 1, 1885, and the premium disappeared. For larger amounts than $10 only United States gold coins are legal tender.

Chinese Immigration.—The Planters' Labor and Supply Company petitioned the Government in 1883 for permission to land a sufficient number of Chinese laborers to relieve the existing stringency in the labor market. About six months after the request was granted, the Pacific Mail Steamship Company began to land Chinese coolies at the rate of 1,000 a month. The Government, the people, and the planters themselves became alarmed at this influx. Foreign powers pressed the Government to arrest it, and consequently the permission was suspended. The Government then negotiated with the Japanese Government for a supply of 600 Japanese agricultural laborers a month during the year 1885. The planters, after the suspension of Chinese immigration, again petitioned the Government to allow 2,000 more to be imported as soon as possible, asserting that they could not afford to pay the current rate of wages with the low prices then ruling in the sugar market. The Government refused this request. The Chinese immigrants were acknowledged to be as good as could be obtained. The objections raised against them were that they maintained a system of guilds by which they were able to control the price of labor, that they corrupted the native women, and that their shrewdness and thrift enabled them to wrest from the natives their lands and other property. Most of the business formerly done by native Hawaiians has already passed into the hands of Chinamen, and the European traders and planters began to fear the results of unrestricted Chinese competition. The Legislature voted $300,000 to assist immigration generally, with a preference for Japanese, who contract for three years, receiving their passage from Japan free. Their wages are $10 a month, with board and lodging.

Commerce.—The total value of the imports of domestic merchandise in 1884 was $4,637,514; the total value of exports, $7,977,908. The principal imports were agricultural implements and hardware, of the value of $285,991; lumber, of the value of $283,902; machinery, of the value of $211,172; groceries and provisions, of the value of $470,929; clothing, hats, and boots, of the value of $309,219; cotton, of the value of $191,102; grain, of the value of $184,598; and flour, of the value of $170,280. The total value of exports was $53,181 more than in 1883. There was a decrease in the exportation of rice, paddy, molasses, and other minor articles, but an increase of 14,000 tons in the exports of sugar, which amounted to 142,654,923 pounds. The rice export was 9,493,000 pounds. The exports of sugar during the first six months of 1885 amounted to 121,873,375 pounds, an increase of 31,227,573 as compared with the same part of 1884, while rice, wool, and other articles showed a continued decline. The supplies of domestic produce to merchantmen and national vessels in 1884 were estimated at $89,740, raising the total value of domestic exports to $8,067,648.

The imports of specie in 1884 were $1,180,360, all of it from the United States; the exports were $671,687.

Of the total merchandise imports those from the United States amounted to $3,367,585; from Great Britain, $769,004; from Germany, $225,543; from Australia and New Zealand, $72,026; from China, $179,161; from France, $21,720; from other countries, $2,471. Of the imports from the United States, goods of the value of $2,619,511 were entered free of duty under the reciprocity treaty; free of duty by the civil code, $115,818; paying duty, $422,641; bonded, $133,347. The whole of the exports went to the United States except a quarter of the wool export, sent to Australia, a quantity of edible fungus exported to China, and an insignificant export of rice and sugar to South America and the Pacific islands.

Navigation and Communication.—Of 239 vessels, weighing 186,871 tons, entered at Hawaiian ports during 1884, there were 191 American vessels, of 135,618 tons; 29 British, of 41,398 tons; 4 German, of 2,958 tons; 4 French, of 3,225 tons; and 11 Hawaiian, of 3,672 tons. The merchant navy in 1884 numbered 53 vessels, including 12 steamers, with an aggregate burden of 9,826 tons.

There were thirty miles of railroad in operation in 1884. There are lines of telegraph and telephone wires on the principal islands. There passed through the post-office of Honolulu, in 1883, 233,272 international and 438,865 domestic letters.

Sugar Production.—The sugar-planters of the Hawaiian Islands have been driven by the sugar crisis not only to look for cheaper labor, but to study economies in production and new processes of manufacture. The diffusion process, which has been lately introduced, is said to save 10 per cent. more sugar than the old method. There is estimated to be soil enough in the kingdom to yield under favorable conditions an annual product of not more than 100,000 tons. The virgin soil has been cropped so far without renewal by fertilizers.

HAYTI. (For details relating to territorial divisions, population, etc., see "Annual Cyclopædia" for 1883.)

Government.—The President of the Republic is Gen. Salomon, elected for seven years, dating from 1879. The Cabinet is composed as follows: Foreign Affairs, Finance, and Commerce, Gen. Damier; Justice and Public Worship, O. Madion; War and Navy, Michel Pierre; Interior, Ovide Camen; Public Instruction and Agriculture, F. Manigat.

The United States Minister Resident at Port-au-Prince is Dr. John E. W. Thompson. The Haytian Minister to the United States is Mr. S. Preston; and the Haytian Consul-General at New York, Mr. E. D. Bassett.

Claims against Hayti.—The message of the President of the United States, of Dec. 8, contained the following passage:

> The late insurrectionary movements in Hayti having been quelled, the Government of that republic has made prompt provision for adjudicating losses suffered by foreigners because of hostilities there, and the claims of certain citizens of the United States will be in this manner determined. A question arose with Hayti during the past year by reason of the exceptional treatment of an American citizen, Mr. Van Bokkelen, a resident of Port-au-Prince, who, on suit by creditors residing in the United States, was sentenced to imprisonment, and, under the operation of a Haytian statute, was denied relief secured to a native Haytian. This Government asserted his treaty

right to equal treatment with natives of Hayti in all suits at law. Our contention was denied by the Haytian Government, which, however, while still professing to maintain the ground taken against Mr. Van Bokkelen's right, terminated the controversy by setting him at liberty without explanation.

Army.—The strength of the regular army does not exceed 7,000 officers and men in times of peace, nor the navy one man-of-war.

Finances.—The public indebtedness consists of a foreign debt of $7,507,884, of which $307,884 is a balance due from the French debt of 1825, and $7,200,000, the so-called Domingue loan, and of a home debt of $5,000,000. In July, a committee of French holders of Haytian bonds of 1875, of the Domingue loan, was appointed at a general meeting held at Paris. The loan consists of 166,906 bonds, the interest on which is 40 francs per annum, and of these the "Crédit Général Français" only placed 72,929 bonds at 430 francs. The first coupon falling due on Jan. 1, 1876, was paid; but the next coupon was not paid, the Government stating that a revolution had ousted President Domingue from power. By decree of July 9, 1877, the Government declared that it only recognized the 72,929 bonds above alluded to, and simultaneously reduced the 500 francs nominal value of each bond to 300 francs, and the interest from 40 francs to 18. The period during which the debt was to be redeemed through the operations of a sinking fund was reduced from forty years to fourteen. By a subsequent decree, April 12, 1880, the nominal value of the bonds was restored from 300 francs to 500 francs, and the interest from 18 to 25. Unpaid coupons during the three years from 1876 to 1878 have been funded, and pay 5 per cent. interest. On Aug. 1, 1885, the Haytian Government resumed payment of the coupons, paying the French minister at Port-au-Prince 242,267 francs on account. This payment represented the third quarter of 1883, due Sept. 30 of that year, with promise that all other coupons will be attended to as well.

The expenditures of the Government departments during the fiscal year 1882–'83 were:

Finance and commerce	$494,625
Foreign Affairs	352,080
War and Navy	1,221,197
The Interior and Police	1,159,314
Justice	328,622
Public Instruction	744,350
Public Worship	62,375
Agriculture	309,800
Other outlays	1,333,947
Total	$6,006,310

The chief revenue during the same year was, from duties on imports, $1,459,539, and on exports, $1,862,566.

Commerce.—During the fiscal year 1883–'84, there were imported goods to the amount of $4,240,168, and exported, $7,400,242. The principal export articles were: coffee, logwood, cocoa, cotton, hides, sugar, honey, and drugs. The American trade with Hayti has been as follows:

FISCAL YEAR.	Imports from the United States.	Domestic exports to the United States.
1883	$2,971,515	$3,162,738
1884	2,389,173	2,735,150
1885	2,471,436	3,227,059

Coffee,—Haytian coffee sells lower than any other kind in Europe and America, on account of its being so badly prepared, and being, moreover, mixed with black berries and small pieces of stone. Two private coffee-cleaning establishments have lately been started, one at Petit-Goâve, and the other near Port-au-Prince. They buy the coffee in the shell at the plantations and then prepare it by machinery. After a while, it is hoped, such establishments will multiply, and Haytian coffee eventually attain that rank abroad which it is entitled to if its otherwise good flavor as a beverage be considered. In Europe, where labor is cheap, Haytian coffee is picked over and, being freed of stones and shriveled berries, it commands from 10 to 20 per cent. more than in the original state. This is also true of Haytian cocoa, so miserably manipulated on the plantations that it ranks lowest on the list, while with a little care it would bring as much money abroad as Bahia, Pará, Trinidad, and Guayaquil cocoa.

Sugar.—Sugar-planting is also in a very backward state, although at the time when Hayti was still a French colony, a hundred years ago, it was the greatest sugar-producing country, and the quality of it was then unsurpassed. Yet there is some inducement to cultivate the cane, ship the sugar abroad, get it refined, and reimport it in the refined state, for, if identity can be proved, it then enters duty free. The duty on refined sugar is five and a half cents a pound in Hayti, and in the cities none but refined sugar is consumed. Consular reports are unanimous in saying that there is a general lack of capital, and of a good rural police force. The cultivation of both tobacco and the ramie textile plant has been abandoned.

Commerce.—The Haytian trade during the calendar year 1884 was as follows:

PORTS.	Imports.	Duties collected.	Exports.	Duties collected.
Port-au-Prince	$1,693,071	$629,638	$1,762,104	$572,198
Cape Haytien	1,078,314	848.834	1,531,447	1,395,377
Jacmel	208,938	40,184	782,694	284,635
Cayes	326,251	146,037	590,700	135,011
Gonaïves	301,400	96,207	946,254	340,138
Saint-Marc	124,059	70,096	424,022	93,036
Petit-Goâve	97,844	42,504	742,117	175,306
Port à Paix	82,000	45,738	203,450	100,308
Aquin	39,991	35,348	132,455	56,047
Total	$3,951,868	$1,954,581	$7,115,243	$3,152,056

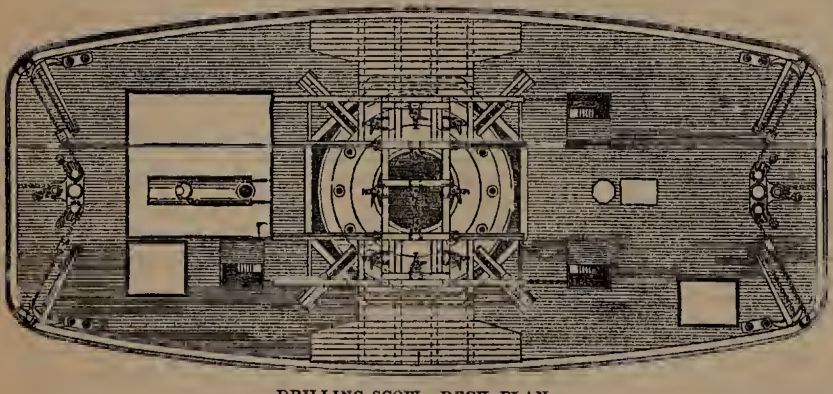
The chief articles reported during 1884 were coffee, 31,560 tons; cocoa, 691 tons; cotton, 750 tons; logwood, 119,098 tons; sugar, 277 tons; wax, 4 tons; hides, 173 tons; agave-fiber, 1 ton; lignum-vitæ, 217 tons; lignum-vitæ gum, 14 tons; orange-peel, 181 tons; honey, 146,785 litres; and mahogany, 2,896,841 superficial decimetres.

The foreign trade in the same year was distributed as follows: Imports from the United States, 52 per cent.: France, 21; Germany, 9; England, 15; other countries, 3. Exports to France, 65 per cent.; United States, 14; Germany, 9; England, 5; Belgium, 3, and other countries, 4.

HELL-GATE, IMPROVEMENTS AT. East river forms a large portion of the water-front of New York and Brooklyn, and is the most important avenue of coastwise trade in the United States. Its channel is scoured by strong tides, which keep it permanently free from shoals of sand and mud. Since the partial removal of the obstructions in Hell-Gate, a heavy foreign trade has taken this route, notably the petroleum-traffic, and, with the completion of the improvements, the East river will afford a convenient access for transatlantic steamers. Its value will be still further enhanced by the opening of Harlem river to the Hudson, preparations for which are now in progress. The unobstructed navigation of East river would also have an important bearing on the question of national defense in case of war. It would double the difficulty of blockading the port of New York, and open Long Island Sound to our larger war-vessels. The obstructions were all within a short distance of one another, in the strait called Hell-Gate, and were occasioned by numerous reefs encroaching on the channel, and the violent currents to which they gave rise, making navigation extremely hazardous.

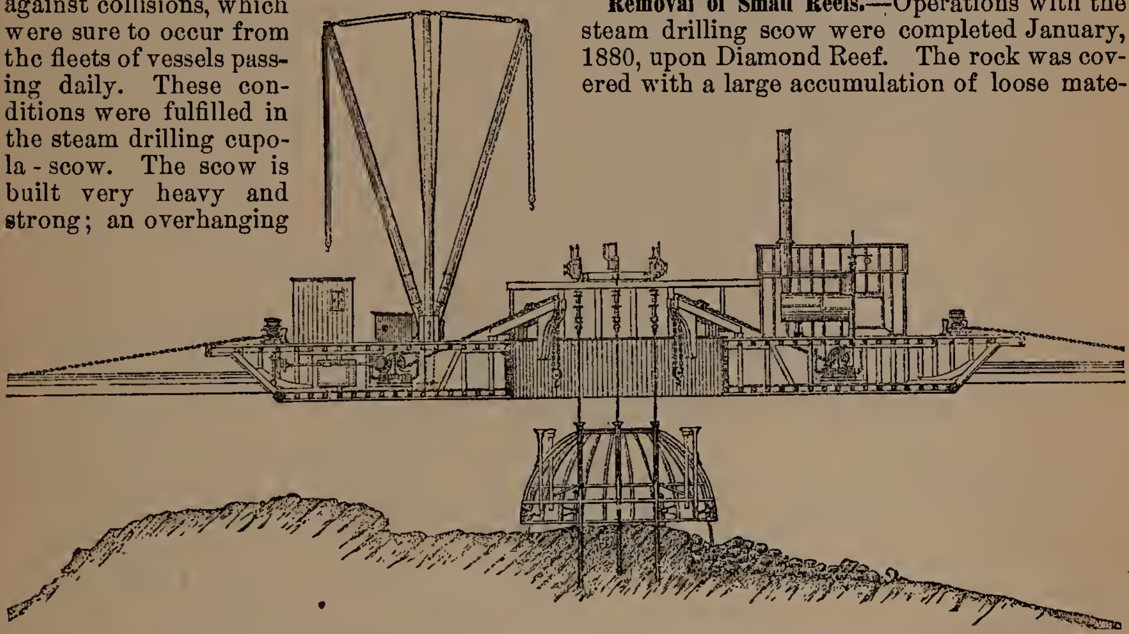
Early Work.—A process of surface-blasting was first applied by M. Maillefert in 1851. His method consisted simply in placing upon the rock a charge of gunpowder, usually of 125 pounds, in a tin canister, and exploding it by the voltaic current. The weight of the water resting upon the charge increased the effect. No means were provided for removing the broken rock except by breaking it up by successive explosions till it was fine enough to be carried away by the currents. M. Maillefert's operations resulted, by the use of 620 charges containing 74,192 pounds of powder, at a cost of $13,861, in removing from the rocks to which they were applied the projecting prominences of small area, but were of little effect when, after reaching the main rock, a considerable extent of surface had to be dealt with. The depth of the water was increased, on Pot Rock, from 8 to 18·3 feet; on Frying-Pan, from 9 to 16 feet; on Way's Reef, from 5 to 14 feet; and on Shell Drake, from 8 to 16 feet. Bald-Headed Billy and Hoyt's Rocks were blown into deep water. The depth on Diamond Reef was but slightly if at all affected, and no effect was produced on Hallet's Point Reef. In 1852 Congress appropriated $20,000 for the removal of obstructions, and Major Fraser, by Maillefert's method, increased the depth over Pot Rock to 20·6 feet. In 1856 an advisory council to a commission on the removal of obstructions in Hell-Gate recommended a plan which, as to its general features, was substantially the same as one that Lieutenant-commanding Davis had proposed in 1848. Instead of Maillefert's process of surface-blasting, they recommended drilling. This would have had to be done from within a diving-bell, which was impracticable because of the certain disturbance of the apparatus by currents, and the liability to collisions from passing vessels. All of the plans so far proposed seem to have been limited to removing the smaller rocks lying in the channel; the possibility of clearing away the larger reefs was not yet conceived.

Work with the Drilling-Scow.—In 1866 the engineering department instructed Gen. John Newton to make an examination of Hell-Gate, and present a plan and estimate of the operations necessary to improve its navigation. A report was submitted in January, 1867, with an estimate for removing the reefs by blasting, after drilling the surface from a fixed platform above the water. In whatever plan might be decided upon, it was considered essential that the drills, which, to avoid interference from currents, were to be worked within iron tubes reaching from the platform to the rock, should be attached to a framing kept absolutely fixed while the drilling was going on; and that the divers, or the machinery necessary to handle and remove from the bottom the rock blasted, should be protected from violent currents. It was proposed to accomplish the lat-



DRILLING-SCOW—DECK PLAN.

ter object by a system of floats and iron curtains so arranged as to constitute a dam protecting a space of 160 feet long and 40 feet wide, within which the work could go on uninterrupted. Another machine was alternatively suggested, embodying the same principle, to consist of an iron caisson or cylinder, pointed at the ends, open at the top and bottom, and having self-adjustable legs to accommodate themselves to the irregularities of the rock, and to support it and keep it level. The top of this structure was to be above the level of the highest tide, and to be framed over so as to form a platform, on which the machinery could be placed, and from which the operations could be conducted. It was important to have it adaptable to all the rocks on which it was intended to operate, whatever their size and shape, and that it be perfectly stable against the action of the currents without being unwieldy. It was furthermore considered necessary to furnish it with a protection against collisions, which were sure to occur from the fleets of vessels passing daily. These conditions were fulfilled in the steam drilling cupola-scow. The scow is built very heavy and strong; an overhanging guard, faced with iron, surrounding it as a protection against collisions; and has a well-hole 32 feet in diameter. The caisson or dome is a hemisphere 30 feet in diameter, of a strong iron frame covered with boiler-iron. It is open at the bottom and top, and provided with self-adjustable legs so arranged as to be all let go together after it is lowered. This caisson or dome is simply a framework affording a fixed support to 21 tubes, through which the drills operate. It is connected with the scow by four chains, communicating with four hoisting-engines, by which it is lowered or raised. The scow, having the dome swung by chains, is anchored over the rock to be operated upon. The diver then goes down to examine the bottom and see that the position is favorable. The position of the scow is changed by lengthening and shortening the moving chains with capstans. When all is fixed, the dome is lowered close to the bottom, and established by letting the legs go to adjust themselves on the bottom. The chains that connect it with the scow are unslung, and flexible connections are made between the tops of the drill-rods and the piston-rods of the driving-engines. These connections must be flexible, because the dome is fixed on the bottom, while the scow holding the drill-engines is certain to swing for short distances back and forth. When the drill-holes are ready to be charged, the dome is lifted, and the scow, carrying the suspended dome, is swung off to a safe distance, without casting loose the moorings. The charges of explosives, in tin cases of different lengths to suit the varying depths of the drill-holes, were carried to the spot upon a small scow, whence the diver descended to insert them into the holes. The leading wires were connected with a battery, and the explosion was made with invariably certain effects.

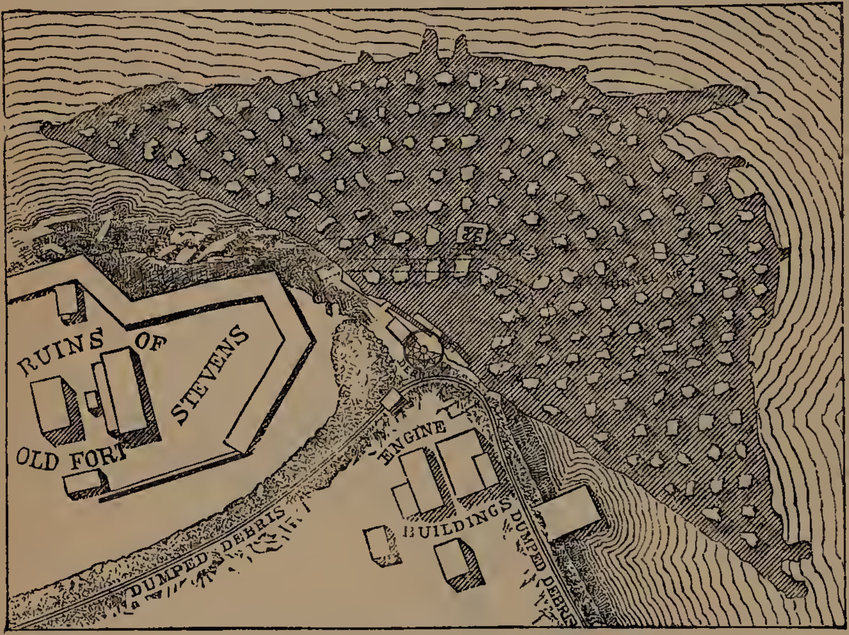


DRILLING-SCOW—SECTIONAL ELEVATION.

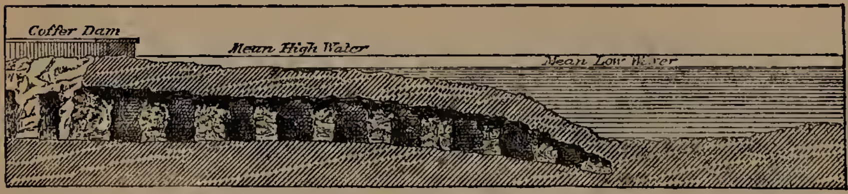
Removal of Small Reefs.—Operations with the steam drilling scow were completed January, 1880, upon Diamond Reef. The rock was covered with a large accumulation of loose material which had first to be removed with a dredging-machine, after which all of the ledge that was uncovered was attacked. The holes were drilled from 7 to 13 feet deep, 4½ inches in diameter at the top, and 3½ inches at the bottom, and were charged with from 30 to 55 pounds each of nitro-glycerin. Coenties Reef was worked upon in alternation with Diamond Reef in 1871 and completed in 1875. In 1872 work was begun on Frying-Pan, and there is now 22 feet at low water. Work was prosecuted on Pot Rock from Aug. 5 till Dec. 28, 1872, during which period there were 16 collisions. The depth on this rock is now 24 feet.

Way's Reef, over which the original depth of water was 5 feet, having already been cleared by the application of M. Maillefert's process of surface-blasting in 1851, and again in 1869, to 17½ feet, was operated upon from Aug. 4, 1874, to Jan. 20, 1875, and the depth of water was increased to 26 feet at low water. The rock within the 26-foot curve measured 235 feet in length by 115 feet of maximum width. Two hundred and sixty-two holes were drilled to an aggregate depth of 2,130·4 feet, 65 drill-blasts and 16 surface-blasts were made, and 16,792¾ pounds of nitro-glycerin and 38½ pounds of dynamite were used.

Hallet's Reef.—For the removal of Hallet's Point Reef it was determined to employ a process of undermining the rock by tunnels and galleries, from which mines should be exploded to break up the whole mass of the rock at once. The reef in question was in the shape of a semi-ellipse, extending 720 feet along the shore, and 300 feet in breadth into the channel; and the cubic contents necessary to be removed, in order to secure a depth of 26 feet at mean low water, amounted to 53,971 cubic yards. The reef was dangerous, not only in itself, but also on account of the eddies to which the tidal currents gave rise on either side of it. Operations were begun here in July, 1869, for the construction of a coffer-dam between high and low water marks; and in the following October the excavation of a shaft, conforming in shape to that of the dam, and 32 feet in depth, was begun. Thence tunnels radiating through the rock, with transverse galleries, 25 feet apart, to connect them, were excavated, till 35 tunnels and 10 galleries were constructed, having an aggregate length of 7,426 feet. The tunnels were from 17 to 22 feet high and from 9 to 12¾ feet wide at the shaft, and tapered off in both dimensions as they went out; and the galleries were from 12 feet high by 9 feet wide down to smaller dimensions.



HALLET'S POINT—PLAN OF EXCAVATIONS.



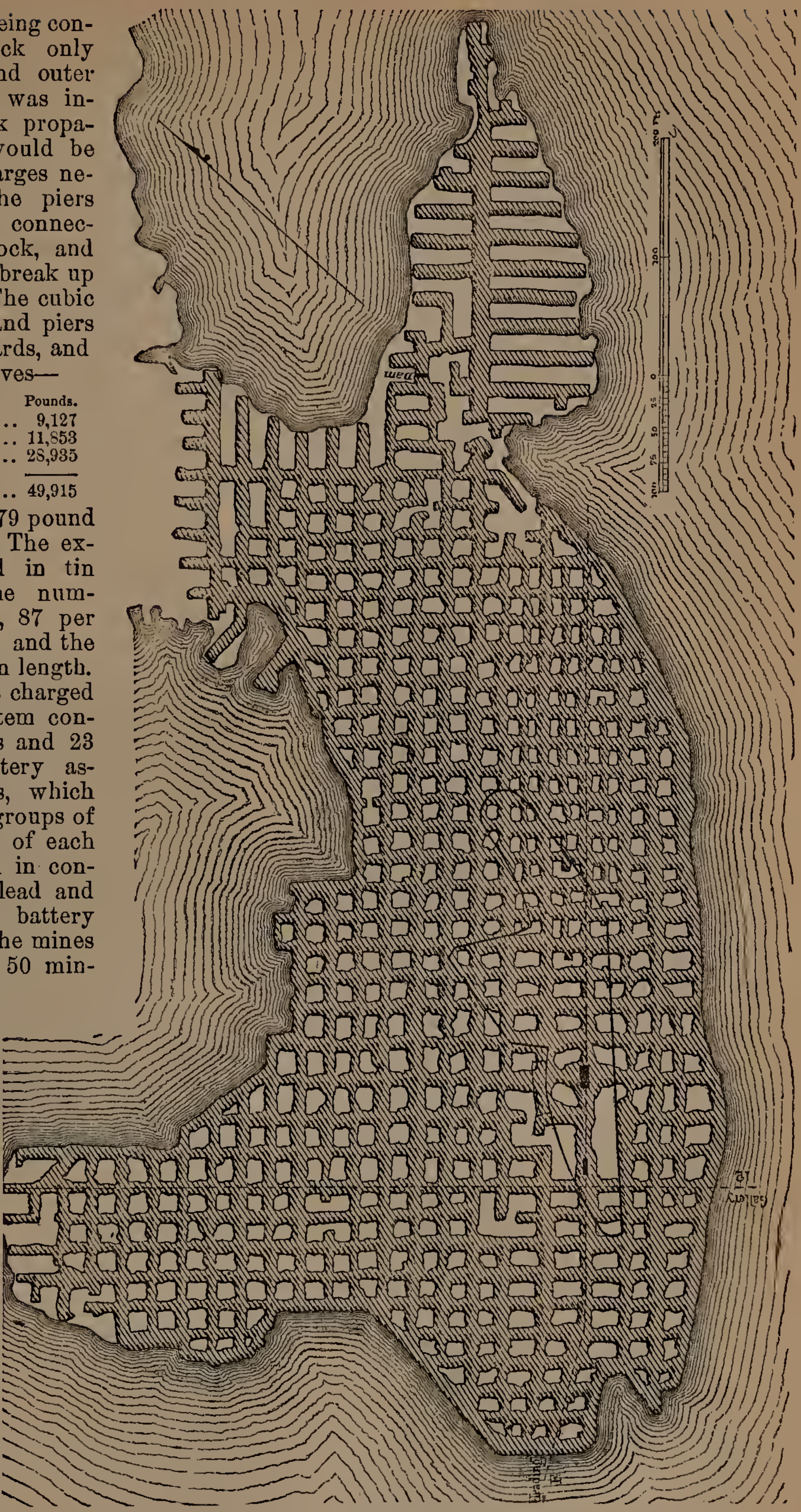
HALLET'S POINT—SECTION THROUGH TUNNEL NO. 7.

The work of excavation was begun in October, 1869, and terminated in June, 1875. Deducting the time lost by suspension of work due to the exhaustion of current appropriations, the actual period consumed in this work was four years and four months. The appropriations were, under the law, devoted to many reefs in the East River and Hell-Gate besides the one at Hallet's Point; the result being that the work was rarely prosecuted in full force at the latter place. As soon as the excavation was finished, the work of drilling holes in the roof and piers, to be charged with explosives, was begun. At the completion, March 25, 1876, there had been drilled in the roof 5,375 three-inch, in the piers 1,080 three-inch and 286 two-inch holes; the total length of holes drilled being 56,548 feet of three-inch and 1,897 feet of two-inch holes. The proximity of the reef to habitations at Astoria, Ward's Island, and Blackwell's Island, made it necessary to devise a system of explosion which, effecting the work of demolition, would do no damage to life and property. It was evident, if to each charge its full capacity of useful work in breaking up the rock were assigned, regard being likewise had to the superincumbent weight of water, no external effect of moment would be perceived in the atmosphere. It was also evident that the magnitude of the rock-wave would depend greatly upon the quantity contained in individual charges; that is, if 80 pounds were required for the individual charge, the vibration of the rock would be much greater than if these charges did not exceed 20 pounds. It was known that 80-pound charges of nitro-glycerin, fired in numbers of 12 to 20, did not cause a destructive wave. Again, the reef, after the excavation, being connected with the rock only through the piers and outer edge of the roof, it was inferred that the shock propagated in the rock would be due mainly to the charges necessary to disrupt the piers and roof from their connection with the bed-rock, and not to the charges to break up the roof and piers. The cubic contents of the roof and piers were 63,135 cubic yards, and the amount of explosives—

	Pounds.
Rend-rock	9,127
Vulcan powder	11,853
Dynamite	28,935
Total	49,915

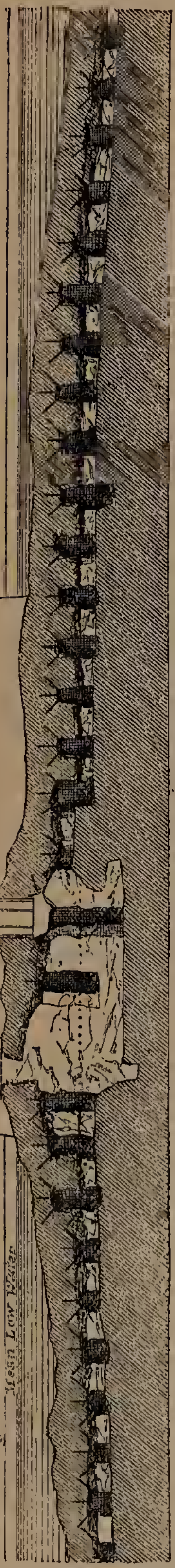
Being at the rate of 0·79 pound to each cubic yard. The explosives were placed in tin cartridge-cases. The number used was 13,597, 87 per cent. being 22 inches and the remainder 11 inches in length. The number of holes charged was 4,427. The system consisted of 3,680 mines and 23 batteries; each battery assigned to 160 mines, which were divided into 8 groups of 20 each. The mines of each group were connected in continuous series, and a lead and return wire to the battery closed the circuit. The mines were fired at 2 hours 50 minutes P. M., Sept. 24, 1876, and there were no injurious shocks in the atmosphere, in the water, or underground. The new facts obtained by this experience are:

1. That an unlimited amount of explosives distributed in blast-holes in moderate charges, proportioned to the work to be done, thoroughly confined in the rock, and tamped with water, may be fired without damage to surrounding objects.
2. That an unlimited number of mines may be fired simultaneously by passing electric currents through the platinum-wire bridges of detonators.

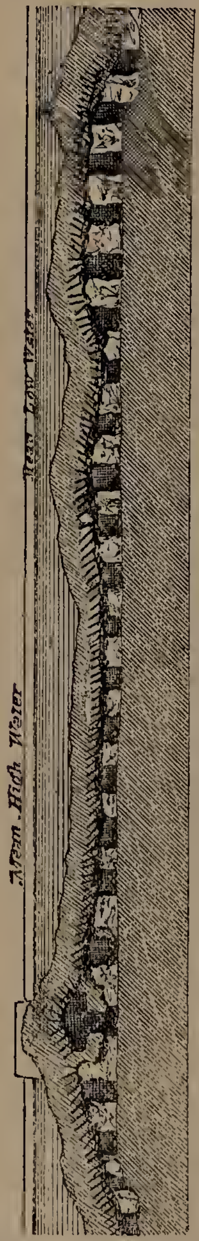


EXCAVATIONS OF FLOOD ROCK.

Flood Rock.—Substantially the same methods as those that had proved efficient upon the Hallet's Point Reef were applied to the larger and more formidable Flood Rock. Two shafts were sunk from the ridge of the rock, whence the whole reef—1,200 feet in length and 602 feet in width, about nine acres—was undermined by two sets of parallel galleries, running at right angles to one another. The piers of rock were about 15 feet square and 25 feet apart from center to center. The roof of the cross-galleries, which ran at right angles to the lines of stratification, was blasted down as thin as it would be safe to leave it. Considerable risk was incurred in this part of the work, from the danger of the rock's crumbling, and from the uneven and uncertain thickness of the roof. The average thickness was 18·8 feet, and the minimum thickness 10 feet. The exact thickness could not be ascertained beforehand, for no soundings could distinguish between the solid rock and a concretion of bowlders and shells formed upon it. Had the excavations at any time broken into a large seam, the mine would have been flooded, and all the work and probably many lives would have been lost. Occasionally small seams were met. One seam was 10 inches wide and 100 feet long; another, from 1 to 4 inches wide and 400 feet long, extending clear across the reef, carried 350 gallons of water a minute. The latter was dealt with after protecting the completed part of the work by building across the gallery a door capable of withstanding the pressure of the water. The seams were all walled, as fast as they were opened, with Portland cement. The total length of the galleries was 21,670 feet.

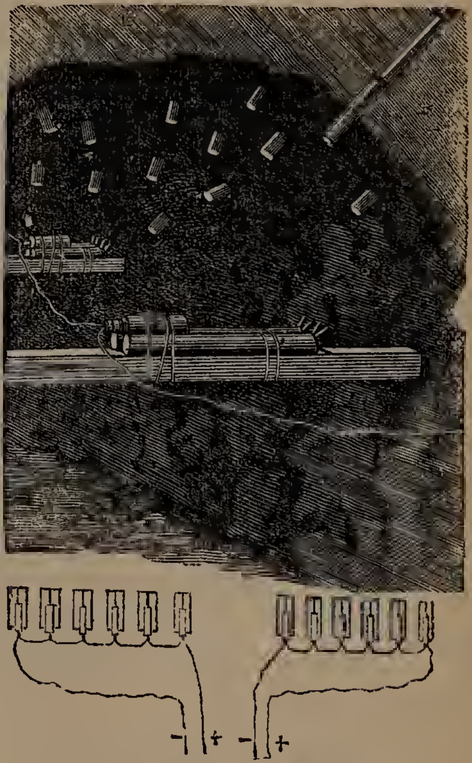


FLOOD ROCK—SECTION THROUGH GALLERY 12.



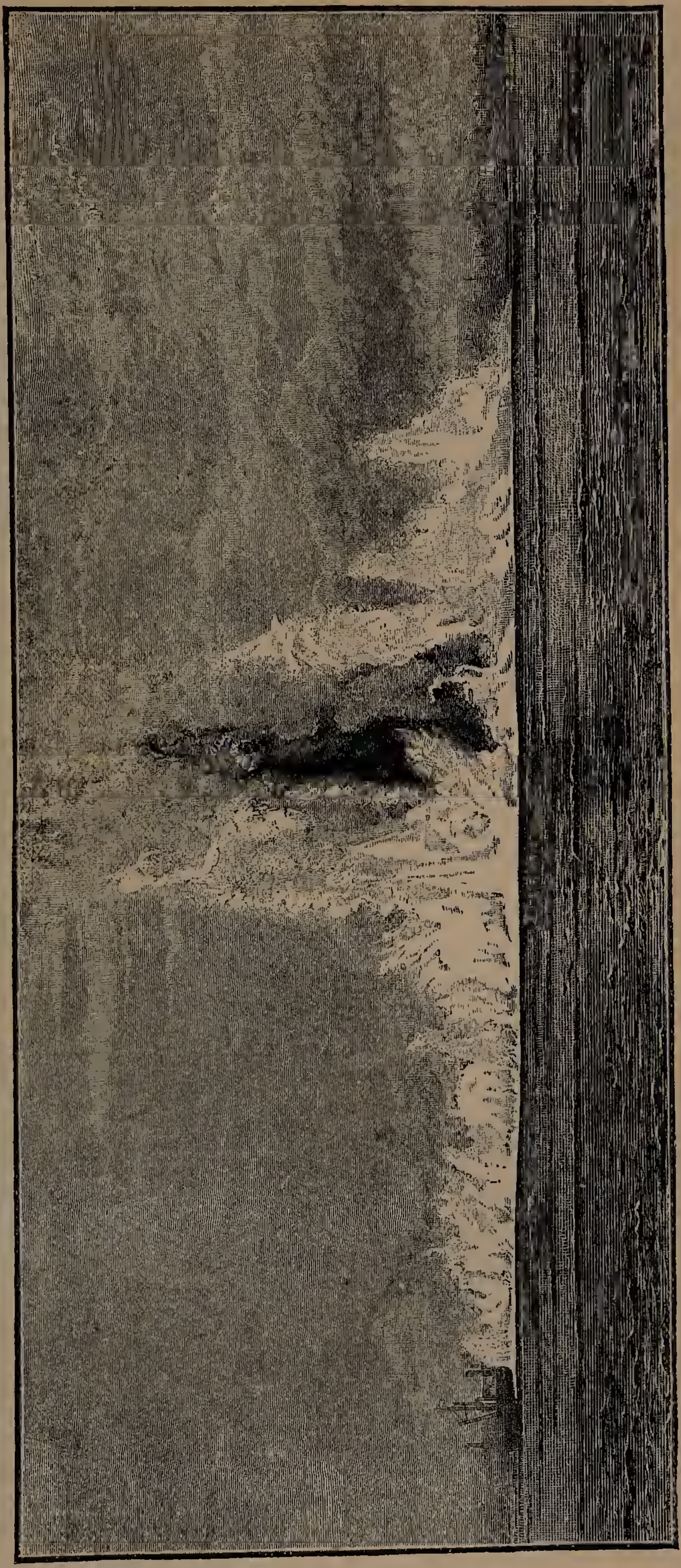
FLOOD ROCK—SECTION THROUGH HEADING F.

The galleries were excavated to depths varying with the uneven surface of the reef. The roof was then drilled with holes for the reception of the explosive cartridges. The holes were slanted upward at angles varying from 75° to 45°, and were made from 8 to 10 feet deep—except where the existence of seams open to the river made it impossible to obtain the depth wanted—and of sufficient capacity to receive a rigid two-and-a-half-inch cartridge throughout their entire length. The holes were charged with rack-a-rock as the principal explosive (see page 346). The mixing was done in small batches on Great Mill Rock, in a lead-lined trough, and the explosive was packed at once into cartridge-cases 2¼ inches in diameter and 24 inches long, made of copper 0·005 of an inch thick. To prevent the corrosion of the copper by the chemical action of the sulphureted water running through some



THE CHARGES IN THE MINES.

of the drill-holes, the cartridges were dipped in melted resin, beeswax, and tallow. After being loaded, they were soldered with a steam-heated iron, were removed as fast as they were filled, and were carried to the mine in boxes containing twenty each; so that the amount of mixed explosive above-ground at any one time was never enough to do more than local damage in case of an accident. These cartridges were inserted in the drill-holes, one after the other, till the holes were filled, the last cartridge in every case being filled with dynamite, with its end left to project about six inches, so that it might receive the full effect of the shock from the initial charges connected with the battery. This cartridge is 15 inches long and 2¼ inches in diameter. In its forward or projecting end is inserted a small copper shell filled with fulminate of mercury. The other cartridges, charged with rack-a-rock, are 24 inches long by 2¼ inches in diameter, and are provided at their forward ends with a fulminate primer which is inserted after they are filled. This primer consists of a fulminate exploder in a copper tube containing an ounce of No. 1 dynamite. The cartridges are secured in the holes by divergent wires at their lower ends; and the dynamite cartridge is also fastened with wooden wedges. The mine-exploder consists of a brass cylinder, eight inches long by two in diameter, filled with dynamite. Inclosed within the dynamite is a fuse, the wires from which pass through a divided cork in the mouth of the brass cylinder. It consists of a copper tube nearly filled with 30 grains of fulminate of mercury. Fitting in the open end of this tube is a second tube containing sulphur, through which pass the two conducting-



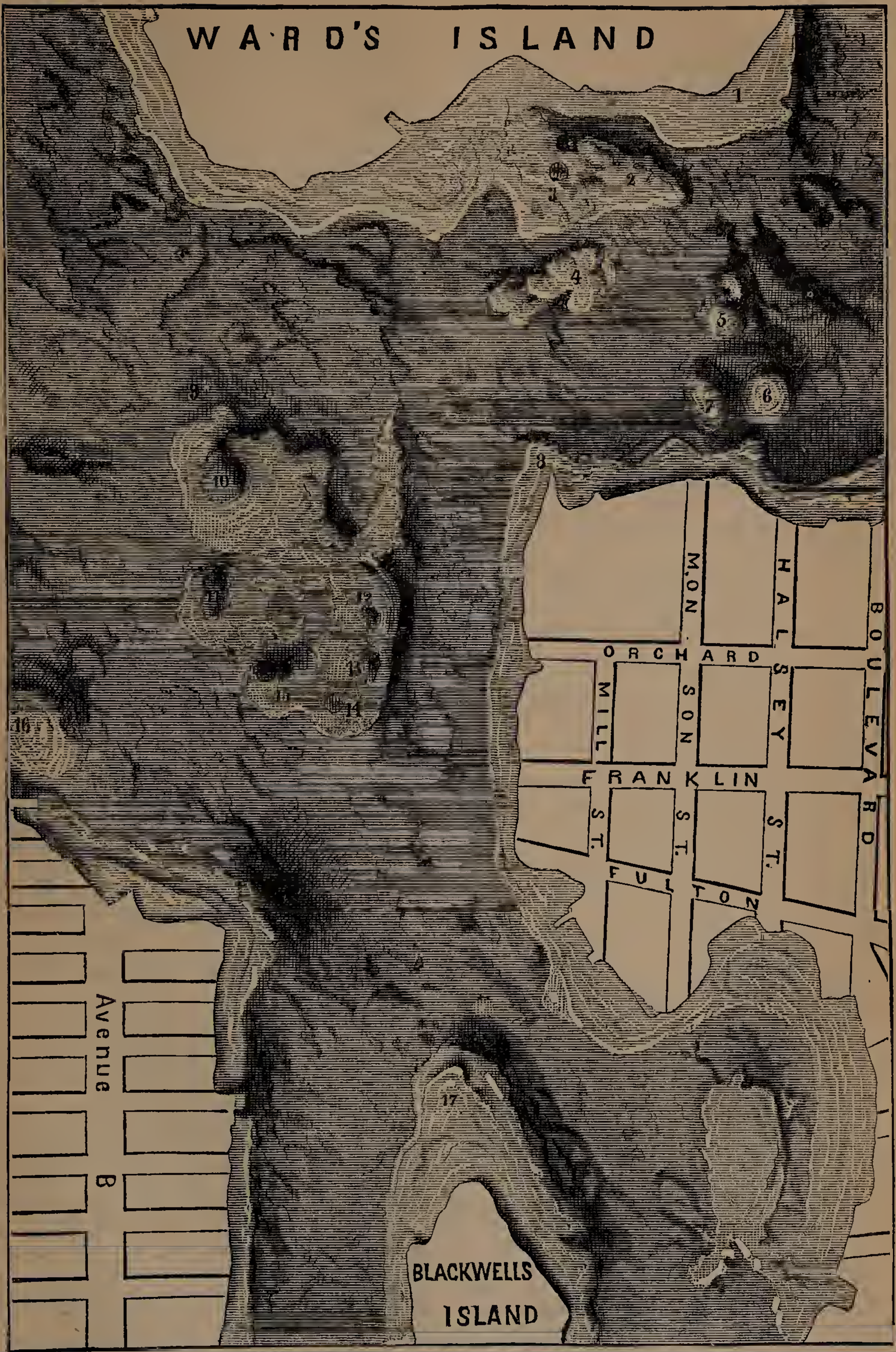
EXPLOSION OF FLOOD ROCK. FROM A PHOTOGRAPH BY A. D. FISK.

wires, they being held firmly in place by the sulphur. The inner ends of the wires are united by a small platinum wire. The ends of the wires are then surrounded with fulminate, and the two parts of the tube are put together, that containing the wires slipping within the other. The entire fuse is then covered with gutta-percha. The passage of an electric current through the wires heats the platinum bridge to redness, and causes an explosion of the fulminate.

The number of pounds of rack-a-rock put into drill-holes was 240,399; of dynamite, 42,331; total, 282,730 pounds. There were 11,789 drill-holes in the roof and 772 in the pillars, and their total length was 113,102 feet, or more than twenty miles. The whole amount of rock to be broken by the final blast was 270,717 cubic yards, covering an area of about nine acres. The primary charges, the office of which was by their detonation to produce the explosion of the charges in the drill-holes, were placed along the galleries at intervals of 25 feet, on timbers extending from wall to wall, and consisted of two 24-inch dynamite cartridges like those already described lashed to the timber, with one of the "mine-exploders" bound upon them. The entire mine was divided into 24 independent circuits. Within each of 21 of these circuits were 25 fuses or mine-exploders, while three circuits contained 22 fuses each. A wire from the battery on the surface of the rock at the mouth of the shaft led from one fuse to the next, until the 25 fuses were in the same electrical circuit, and thence back to the battery. So far as was practicable, adjacent charges were put on different circuits, so that if any circuit failed through fault in the connections, an explosion of its charges would still be insured through the sympathetic action of the adjoining charges. The whole number of these primary charges was 591. Some of the circuits were nearly a mile long. The battery consisted of sixty cells, all coupled in one series, each of which had an electro-motive force of 1·95 volts and an internal resistance of 0·01 ohm. The plates were 6 inches by 9 inches—four carbon and three zinc plates in each cell, separated by a quarter of an inch. The ordinary bichromate solution was used. The poles were constituted of two large mercury cups, into one of which were dipped the 24 lead wires, while the 24 return wires terminated in a third cup. Between this third cup and the remaining pole of the battery stood the apparatus for closing the circuit. It consisted of a stout iron cup containing mercury, in which sat a thin glass tumbler also partly filled with mercury. Two large strips of copper connected the mercury in the iron cup with one pole of the battery, and that in the glass with the cup containing the return wires. To close the circuit through the fuses it was only necessary to break the tumbler so as to let the mercury in it mix with that in the iron cup. To do this at the proper moment, a quarter-inch iron rod four feet long, terminating at the top in a small round disk, stood with its point in the bottom of the glass. It was long enough to pass through the roof of the battery-house. A 30-grain platinum fuse, connected with a small battery at Astoria, was laid on the disk and stuck on with a lump of wax. It had been previously determined by experiment that the blow struck by this fuse on exploding, and transmitted by the iron rod, would be so sharp as to pulverize the tumbler and yet not splash the mercury.

The mine was flooded by two siphons of 12 and 16 inches respectively, in fifteen hours and a half, ending at 3.30 A. M., Oct. 10. The explosion was set for 11 A. M., Oct. 10, but everything could not be made ready and tested in time to fire at the appointed moment. The explosion did not take place till 11.13, which caused some confusion in the seismoscopic observations. The whole area of the reef was shattered. The plan of making the excavations large enough to swallow all the *débris* of the reef and leave a channel deep enough, without further operations, already abandoned at Hallet's Point as more expensive than dredging up the broken rock, was never entertained at Flood Rock. Though the charges all exploded at the same instant, the time and the appearance of the effect above the water-surface varied according to the strength of the rock and the depth of the water. There was no loud report, and no dangerous shock. The breaking of some panes of glass and the shaking down of a few bricks and loose ceilings constituted all the damage that was done.

Pending the awarding of a contract for dredging, the work of removing the rock was begun with a scow belonging to the Government, as soon after the explosion as possible. From 15 to 30 tons of rock were hoisted out daily, after being slung by divers on chains. A contract has been let for the removal of 30,000 tons of the rock at $3.19 a ton, the contractor to do his own surface-blasting. This is less than the price for which rock was removed on similar terms at Hallet's Point. The contractor has two grapples at work, and is removing an average of about 120 tons a day. As a whole, the cost of mining a cubic yard of rock has been reduced 34⅗ per cent. from the cost of doing the same work at Hallet's Point. The total cost of the work done on Flood Rock, including the final blast, amounts to $2.99 a cubic yard of the whole amount of rock broken, or $5.66 less than the cost of breaking Hallet's Point. A considerable part of this gain will be expended on the proportionately larger amount of dredging to be done. The net result, however, will show an improvement of not less than 30 per cent. The total cost of the final blast at Hallet's Point was $81,092.24; at Flood Rock it was only $106,509.93, though the blast was 5·6 times as large. The progress with the dredging gives promise that an 18-



RIVER-BOTTOM AND REEFS AT HELL-GATE.

1, Negro Point; 2, Holmes Rock; 3, Hog-Back; 4, Frying-Pan; 5, Pot Rock; 6, Way's Reef; 7, Shell Drake; 8, Hallet's Point; 9, Heel-Tap; 10, Great Mill Rock; 11, Little Mill Rock; 12, Gridiron; 13, Flood Rock; 14, Hen and Chickens; 15, Negro Heads; 16, Rylander's Reef; 17, Bread and Cheese.

foot channel, 400 feet wide, over the worst part of the reef, may be cleared out by spring. If the funds are supplied as needed, the dredging can all be completed in three years.

In the map, the white margin around the shores represents the parts that have less than 26 feet of water at mean low tide. The work done or to be done is thus summarized.

Negro Point (1): To be undermined and cut off on a line with the Sound-entrance wharf. Holmes Rock (2) and Hog-Back (3) to be finished with a sea-wall. Frying-Pan (4), Pot Rock (5) reduced to 24 feet below mean low water. Way's Reef (6), Shell Drake (7), reduced to the depth of 26 feet. Hallet's Point (8), entirely removed to the depth of 26 feet. Heel-Tap (9), broken to 26 feet, dredged to 22 feet. Great Mill Rock (10), Little Mill Rock (11), connected by a dike; nothing further to be done. Gridiron (12), Flood Rock (13), Hen and Chickens (14), Negro Heads (15), broken to 30 feet; 15 now being removed to open the Middle Channel at once, and the remainder afterward to full depth. Rylander's Reef (16) to be embanked. Bread and Cheese (17) has been embanked.

HINCKS, Sir FRANCIS, a Canadian statesman, born in Cork, Dec. 14, 1807; died in Montreal, Aug. 18, 1885. He was a son of the Rev. Thomas Dix Hincks, of Belfast, an eminent scholar. After serving an apprenticeship of five years to a Belfast firm of shippers, and carrying on business in Liverpool for one year as junior partner in a firm of commission-merchants, he in 1832 settled in Canada and opened a warehouse in York (now Toronto). He became secretary of a mutual insurance company, and cashier of the People's Bank. As accountant of the commission appointed to investigate the Welland Canal frauds, he came prominently before the public; but he himself dated his career as a public man from his publication of the Toronto "Examiner" in 1838. This paper advocated responsible government, and the secularization of the clergy reserves. Mr. Hincks was in hearty sympathy with the principles generally of the Reformers, and was elected by the Reformers of Oxford County a member of the first Union Parliament. The Reform party was then in opposition. Mr. Hincks became dissatisfied with the factious tactics of his political friends, and on June 22, 1842, resigned his seat in Parliament on the occasion of accepting office as Inspector-General. He was re-elected, and was subsequently joined in the ministry by his former political associates, Baldwin and Lafontaine. This ministry resigned on account of the peculiar notions of responsible government entertained by the Governor, Lord Metcalf. Mr. Hincks, being defeated at the general elections, once more went into journalism and established the Montreal "Pilot," a Reform paper, which he successfully conducted for four years. In December, 1847, he was again elected by his old constituents, and became Inspector-General in the Baldwin-Lafontaine government. On the resignation of the ministry in 1851, Mr. Hincks was sent for to form a ministry. The Hincks-Morin government subsidized a line of Atlantic steamers, assisted in the promotion of the Grand Trunk Railway, concluded a reciprocity treaty with the United States, and initiated the Intercolonial Railway. The Reform party became divided on the question of the secularization of the clergy reserves, which brought about the fall of the government. Mr. Hincks was a strong advocate of the abolition of the seignorial tenure, which prevailed in Lower Canada, but that question was not brought to an issue during his term of office. In 1855 he was appointed Governor of Barbadoes and the Windward Islands, which was a new departure in the Colonial Office, he being the first colonial statesman to receive a colonial governorship. Governor Hincks paid considerable attention to the West Indian labor question, and was the first of the governors to champion the anti-slavery party. He provoked an angry controversy by his contention that free labor was cheaper than slave labor, and that Barbadian property had improved in value by the abolition of slavery. In 1861 he was appointed Governor of British Guiana. He was knighted in 1862. Sir Francis was pensioned by the Imperial Government, and, returning to Canada, entered Sir John Macdonald's Cabinet as Minister of Finance. He retired in 1873, became president of a bank that failed, and underwent a criminal trial, which resulted in his vindication. He died of small-pox.

HOLLAND. See NETHERLANDS.

HONDURAS, a republic in Central America. Area, 39,600 square miles; population in 1885, 351,700.

Government.—The President is Gen. Luis Bográn, whose term will expire on Nov. 27, 1887. The Cabinet is composed of the following ministers: Foreign Affairs and Agriculture, Licenciado Don Gerónimo Zelaya; Justice, Public Works, and War, Señor R. Alvarado; Interior, Señor A. Gomez; Finance, Señor F. Planas.

The United States Minister is Hon. H. C. Hall, resident at Guatemala, and the Consul-General at New York, Mr F. Valentine. The Consul at San Francisco is Mr. John J. Wright. The American Consul at Ruatan and Trujillo is Mr. W. C. Burchard.

Colonization.—The Government granted to Mr. Otto Zurcher 9,000 caballerías of Government land for purposes of settlement and the privilege of exporting, duty free, for ten years, all that the new colony may produce.

In November the Government conferred the necessary authority on Don Daniel Quiró, appointing him Inspector of Indian Affairs for the region, to form a settlement out of the semi-civilized Indian tribe of the Yoros, with the privilege of importing, duty free, whatever agricultural implements, etc., the new settlement of Yoro may stand in need of.

Finances.—The budget estimate for 1885 was reduced to $331,949. At the same time the income-tax, which had been decreed on May 30, when war was threatening, affecting all incomes of $200 a month and upward, was revoked in October. A congressional committee was also appointed, by virtue of a vote bearing date March 5, to investigate the alleged frauds on the public exchequer, of which ex-President Marco Aurelio Soto is accused.

Railroads. — Mr. Hungerford, Engineer-in-Chief of the Central Railroad of Honduras, has surveyed the line to connect Trujillo with Juiticalpa, a distance of two hundred miles. The concession to build this line was given to a New York syndicate. Work has been proceeding on the line of the Northern Honduras Railway, which is to connect Trujillo with Puerto Cortés, or any point on the frontier of Guatemala, for which the concession was obtained in 1884, and which is expected to be in operation in September, 1887. Liberal inducements are also held out by the Government to *bona fide* settlers from abroad in this section of the country, which even now is very important as a fruit-growing region, whence an active export is going on to New Orleans and New York of bananas and cocoanuts, especially from the island of Bonaca, where there are extensive cocoanut-walks, and from which point bananas are also shipped in great quantities to American ports.

Transportation.—In October the Government made a contract with Don Eduardo Busquet for the establishment of a coasting-line of steamers on the northern Atlantic coast.

The Government also took vigorously in hand in 1885 river improvements and the digging of canals to connect rivers in the republic. Thus a contract was made with George W. Shears to deepen the Ulua and Blanco rivers, so that they may be navigable to a point called La Imprenta. A similar contract was made with Waldemar Allstrom and Don Miguel Luís Aguilera, for the deepening of the Aguan river all the way to a locality called La Lima, ten miles from the city of Yoro.

Tobacco.—The Government has made efforts to facilitate the cultivation of tobacco. Tobacco-seed is allowed, by decree of October, 1885, to enter the country duty free. The tobacco-tax, which planters have to pay, is $3 for every hundred pounds produced, and the tax on cigars, which manufacturers have to pay, is $1 a thousand.

Mines.—Gold and silver mining enterprises in Honduras, in which American companies are engaged, are becoming more profitable. There are five New York companies.

The October report of the Yuscarán Mining Company stated that the company had already expended a large amount of money, and that a shaft had been sunk about 140 feet. It is proposed to sink this shaft 400 feet before driving, to connect with the main Guayabillas vein.

The report of the Paraíso Reduction Company, of Dec. 1, mentions the purchase and erection of a large roasting-furnace. The company also purchased the "Ultimo" and "Coco" ingenios, both necessary to control the water of the Quebrada Grande River and for milling facilities; furthermore, the ingenio of Daniel Fortín, the largest and best-equipped native reduction-works in that district. Engineers were engaged in a complete survey of the whole water system of the district. By securing the immense water-power, thousands of tons of ore could be made available daily for treatment at a profit.

The development of the Santa Elena mines uncovered such a mass of gold-bearing quartz that it was considered best to introduce stamping machinery at the Paraíso reduction-works, and treat it as a free milling of ore by plate amalgamation. Machinery for a forty-stamp mill complete was shipped in August from Cincinnati, to be in place on March 1, 1886, increasing the capacity of the Paraíso reduction-plant about 100 tons a day. There were made at the Santa Elena mine three very rich discoveries in the month of September—veins with the usual good average of silver and gold, and rich threads in the center of the veins.

The general report made by Don Adolfo Zuriga, Attorney-General of Honduras, in September, dated from Tegucigalpa, says, "Within the next six months there will be very considerable quantities of gold and silver shipped to New York from here, and within two years Yuscarán will be such a mining center as will equal any mining district in America."

Commerce.—The following table shows the imports from Central America:

WHENCE.	1883 and 1884 average.	Increase from 1881–'82.
Into—		
England	$7,513.000	$1,026,000
France	860,000	176,000
United States	6,160,000	3,001,000
Total	$14,534,000	$4,203,000

WHITHER.	1883 and 1884 average.	Increase and decrease from 1881–'82.
From—		
England	$3,747,000	$197,000
France	396,000	365,000
United States	3,178,000	1,553,000
Total	$7,081,000	$1,385,000

The average trade movement in 1883 and 1884 was distributed as follows:

COUNTRIES.	Imports.	Exports.
Costa Rica	$3,000,000	$4,200,000
Guatemala	2,950,000	4,178,000
Honduras	750.000	650,000
Nicaragua	1,100,000	1,800,000
Salvador	2,300,000	3,500,000
Total	$10,000,000	$14,328,000

HUGO, VICTOR-MARIE, a French author, born in Besançon, Feb. 26, 1802; died in Paris, May 22, 1885. He was the third son of Count Joseph-Leopold-Sigisbert Hugo, a distinguished soldier of the revolutionary and Napoleonic wars and a military writer of reputation, and Sophie Trébuchet, the daughter of a ship-owner of Nantes. His father was one of the earliest volunteers of the revolutionary army, and his mother was a royalist in her sympathies, and had shared in the dangers of the Vendean insurrection; so that he spoke of himself as born with both royalist and imperial aspirations. He alluded frequently to the antiquity of his race, but his paternal grandfather was a master builder at Nancy, and made no pretensions to nobility. He was a feeble child, and when about six weeks old he was carried to Elba, where his father's regiment was stationed, and there and in Corsica he remained three years. The two succeeding years his mother passed at Paris with her children. She then went with them to Italy, where her husband, at that time Col. Hugo, was governor of the province of Avellino in the kingdom of Naples. The future poet, according to his biographers, played about the foot of Vesuvius, and shuddered at the stories of the celebrated bandit known as Fra Diavolo, whose band his father broke up. In 1809 Madame Hugo returned to Paris with her family and lived in an old house with a high-walled garden, where Victor played and studied with his brothers, who afterward achieved distinction in literature, and with the girl who became his wife. He was taught by an old married priest, and by Gen. La Horie, who had been compromised with Moreau, was for several years under the surveillance of the imperial police, and took refuge in the Hugo household, where he was accustomed to sit with the boy upon his knee and read with him Polybius and Tacitus. The hiding-place of La Horie was discovered and he was arrested and imprisoned, escaping only to take part in an insurrection, in which he perished; and this incident is supposed to have aided the mother's influence in giving the poet's mind its first royalistic tendency. In the spring of 1811 Madame Hugo went to Spain, whither her husband, then general and *marechal* of the palace, had accompanied King Joseph Bonaparte in 1809. The journey was not made without peril, among deserted villages and desperate bands of guerrillas. The family took up its residence at Madrid in the Macerano Palace, and the boys were placed in the College of Nobles, where they remained a year, and it was intended that Victor should become one of the pages of the King; but the prospects of the new monarchy continued to be so stormy that Madame Hugo returned to Paris with her younger sons, Eugene and Victor, taking up her former residence, and committing the education of the boys to their former teacher. There was little religion mingled with their instruction, for their mother was less religious than loyal. Gen. Hugo returned from Spain after the overthrow of the Bonaparte kingdom a poor man, as he had purchased an estate there which was confiscated. He afterward conducted the famous defense of Thionville in the invasion of 1814. Madame Hugo, who used to wear green shoes in order to keep the imperial color under her feet, received marks of favor from the returning Bourbons; and during the Hundred Days her husband separated from her and took charge of the education of his sons. He sent them to a boarding-school, where they remained until 1818, attending a course of philosophy, physics, and mathematics at the College of Louis le Grand. Victor showed great aptitude for mathematics, but he preferred poetry to all else, and devoted his leisure time to it. He began to write verse at ten years of age, and at thirteen rhymed about Roland and his chivalry. During the four following years he composed multitudinous verses in the classic style, his more important efforts being the tragedy of "Irtamène," celebrating under an Egyptian disguise the restoration of the Bourbons; the drama of "Inès de Castro," and three acts of an unfinished tragedy, "Athélie, ou les Scandinaviens." A poem, "Sur les avantages de l'étude," submitted in competition for a prize offered by the Academy in 1817, was mentioned with honor, and would, it is said, have been crowned if the author had not spoken of himself in the closing lines as fifteen years of age, which aroused the suspicions of the judges, who feared a mystification.

VICTOR HUGO.

Gen. Hugo had intended his son Victor for the profession of arms, but in 1818 he yielded this point and allowed the young poet to give up the project of entering the École Polytechnique and devote himself to literature. His odes on "La statue de Henri IV," "Les vierges de Verdun," "Moïse sur le Nil," were crowned at the Floral Games of Toulouse. The first he wrote in one night while watching by the bedside of his sick mother, who had fallen asleep regretting that he had not entered for the prize. His poetry from 1818 to 1822 was royalist and religious in tone, and he became the literary idol of royalist society and gained from Chateaubriand the title of "*enfant sublime.*" Chateaubriand also, when appointed ambassador to Berlin, offered him a place as *attaché*, but he declined it, as he did not wish to leave his mother. In 1821 Madame Hugo died, and in 1822 Victor married Mademoiselle Adèle Foucher, whom he had loved from childhood. Under an old agreement of the fathers, the children had been pledged to each other before they were born; but the match had been opposed by both families on account of the youth and poverty of the parties to it. In 1823 Hugo received from Louis XVIII a pension of 1,000 francs, granted, it is said, for the singular reason that the poet had written a letter, which came into the hands of the police, offering shelter to a youthful comrade named Delon, condemned for taking part in the conspiracy of Saumur. This generous boldness on the part of the young royalist poet touched the King's fancy. Hugo founded a journal, "Le Conservateur littéraire," in connection with his brothers and several friends in 1819, and in it many of his earlier poems appeared. The first volume of "Odes," which in the edition of 1826 was entitled "Odes et ballades," was published in 1822, a mean-looking little book, which won literary success and the praise of the King; "Han d'Islande," in which a love-idyl supposed to represent his own story is given in gloomy setting, appeared in 1823; the second volume of "Odes" in February, 1824; "Bug-Jargal," written, it is said, on a wager, in fifteen days, in 1818, and first printed in "Le Conservateur," came out in book-form in January, 1826; and the third volume of "Odes" in October of the same year. After the publication of "Han d'Islande" the author was made Chevalier of the Legion of Honor, and received a second pension of 2,000 francs. In December, 1827, Hugo published "Cromwell," an unplayable drama, in the preface to which he declared war upon the classic school. In December, 1828, appeared "Les orientales," containing some of the most peculiar and beautiful of his poems. Though romanticism under many able leaders was aggressive in every department of art, Hugo was destined to become its representative champion, and he resolved to make his fight upon the stage. His first attempt was "Amy Robsart," dramatized from Scott's novel of "Kenilworth," in collaboration with a friend. It was produced at the Odéon, and was hissed. In June, 1829, he wrote "Marion Delorme," and in September of the same year "Hernani." The representation of the former was forbidden by the censor; the latter was accepted in October and played Feb. 26, 1830, and met with a brilliant success, a motley crowd of the enthusiastic disciples of the romantic school gathering to support it. Hugo appealed to Charles X from the action of the censor in the case of "Marion Delorme," but the King sustained the critic and tried to soothe the poet with a pension of 4,000 francs, which was rejected. The play was represented at the Porte Saint-Martin as soon as the government of Charles X had passed away. Nov. 22, 1832, "Le roi s'amuse" was brought out at the Théâtre Français, played once, and then interdicted, ostensibly on the ground of its immorality, but possibly because it tended to bring kings into contempt. The poet appealed to the courts against the order forbidding the representation of his play, but his appeal was dismissed, and he then resigned the pensions continued to him from the former government. "Lucrèce Borgia" and "Marie Tudor," dramas in prose, were represented at the Porte Saint-Martin in 1833; "Angelo," also a drama in prose, at the Théâtre Français in 1835; "Ruy Blas," at the Porte Saint-Martin in 1838; and "Les Burgraves," his last drama, was brought out in 1843. "Esmeralda," an opera, had failed shortly after the success of "Angelo." In the mean while he was not idle in other departments of literary labor. "Le dernier jour d'un Condamné" was published in 1829. It is an analysis of the last hours of a man condemned to death, and has a political as well as a literary purpose, aiming, as it does, at the abolition of capital punishment. In March, 1831, was published the great middle-age romance, "Notre Dame de Paris," and in the same year a volume of poems, "Feuilles d'automne." In 1834 appeared "Claude Gueux," a second attack on the death-penalty, and the "Étude sur Mirabeau." "Chants du crépuscule" was published in 1835; "Voix intérieures," in 1837; "Les rayons et les ombres," in 1840; "Lettres sur le Rhin," picturesque sketches of travel, in 1842. So far as literature was concerned, the classic and royalist youth had developed into a romantic and revolutionary man:

> "Fidèle enfin au sang qu'ont versé dans ma veine,
> Mon père vieux soldat, ma mère Vendéenne!"

The change in politics was more gradual; but the poet's father, who died in 1828, lived to see the genius of his son contributing to building up the Napoleonic myth, and to enjoy the "Ode à la colonne," in which he dedicated the Vendôme column as a trophy to the veterans of the empire. In 1829 he had begun to feel some of the inconveniences of legitimist rule, and he was in no mood to protest against the Revolution of July, 1830. He sang of the "Trois jours" in the most beautiful verses that they have inspired. In 1837 Louis Philippe made him an officer of the Legion of Honor, and June 3, 1841, he was elected a member of the French Academy, after

HAUTEVILLE HOUSE, ISLAND OF GUERNSEY, THE HOME OF VICTOR HUGO.

missing an election in 1836, 1839, and 1840. April 16, 1845, Louis Philippe made him a member of the Chamber of Peers. In that body he acted as an independent conservative, and June 14, 1847, he pleaded eloquently for the return of the political exiles, on the presentation of a petition from Jerome Bonaparte for leave to re-enter France. After the Revolution of February, 1848, he accepted the republic, "that majestic form of society, which our fathers have seen grand and terrible in the past, and which all of us hope to see grand and beneficent in the future." He was chosen to the Constituent Assembly as one of the representatives of the city of Paris in June, 1848. Aug. 1, 1848, he founded "L'Evénement," a paper on which his two sons, Gautier, and other friends, were engaged. He criticised the administration of Gen. Cavaignac, and was for a time identified with the reactionary party, but he kept his independence of action, and while demanding with the Right the abandonment of the scheme for the national employment of labor, and the formation of two chambers, he advocated, with the Left, the liberty of the press, and the abolition of the death-penalty. Jan. 10, 1849, he demanded the dissolution of the Constituent Assembly. That year he was chosen tenth on the list of 28 deputies from Paris to the National Assembly. He soon put himself in opposition to the administration of Louis Napoleon, chosen President Dec. 10, 1848. It was said that he was disappointed in his hopes of obtaining high office, and the famous description of the poet as a man of affairs, published in his paper, was quoted as betraying his ambition: "Bras et tête, cœur et pensée, glaive et flambeau, doux et fort, doux parce qu'il est fort et fort parce qu'il est doux, conquérant et législateur, roi et prophète, lyre et epée, apôtre et messie." No such petty motive will explain his subsequent career, and his progress toward advanced democracy may be regarded as the natural course of his mind. He broke with the reactionary party July 10, 1849, on the project for public assistance, and Oct. 10, the same year, he bitterly opposed the intervention to overthrow the Roman Republic. He became the leader, orator, and oracle of the democracy, in the discussion of public education, the reform of the electoral law, freedom of the press, revision of the Constitution. In 1851 he defended, eloquently but unsuccessfully, his son accused for the publication of an article against the death-penalty. Magnificent courage not less than splendid ability marked this era of political effort, and his great speeches have been compared to storms; but of course he was sneered at for his sudden conversion to republicanism, and his own royalist and Napoleonic odes were often quoted against him. He opposed the re-election of Louis Napoleon fiercely, and, about a month before the *coup d'état*, delivered a speech of five hours' duration in which he inveighed against the re-establishment of the empire, which he foresaw. When the *coup d'état* took place, Dec. 2, 1851, he was among the first proscribed. He was one of those members of the Assembly who, shut out of the Palais Bourbon, held a meeting at the mairie of the tenth arrondissement, one of the committee of resistance that tried to organize against the usurpation, and placarded Paris with a denunciation of Louis Napoleon as a traitor to his oath. Dec. 11, 1851, he left Paris under the decree of banishment and went to Belgium. From there he issued a protest against the acts of Dec. 2, 1851, and the *plébiscite* of Dec. 20, which he denounced as a farce. Imperial influence was strong enough to secure his expulsion from Belgium, and, after a short visit to England, he took up his residence in the island of Jersey, which he left, under political pressure, in 1853, for the island of Guernsey, where he remained until the fall of the second empire in 1870.

In 1852 Hugo published at Brussels, "Napoléon le Petit," a diatribe against the new French emperor; and in 1853 appeared "Les châtiments," a series of philippics in verse, against the whole coterie of villains concerned in the overthrow of the republic. In 1856 was published "Les contemplations," mainly a collection of pieces written before 1843. In 1859 appeared the first part of "La légende des siècles," a poet's review of all history, vindicating liberty and attacking tyranny. In 1862, "Les misérables," one of the world-famous romances, appeared, being published in eight different cities and in nine languages at the same time. When Hugo was joined by his family in his place of exile, his younger son asked if the exile would be long, and the father answered that it would. To his son's second question as to how he would spend his time, Hugo answered that he would watch the ocean, and the son rejoined that he would translate Shakespeare. This translation was made and published in 1864 with a preface, "William Shakespeare," by Victor Hugo. "Les chansons des rues et Bois" appeared in 1865, and "Les travailleurs de la mer," a prose epic of the struggle of manhood against the forces of nature, was published in 1866. In 1869, "Hernani" was revived at the Théâtre Français, and held the stage for four months. The same year the grotesque story, "L'homme qui rit," appeared, and did something to impair the author's fame. After the amnesty proclamation of that year, Hugo might have returned to France, but he refused to do so, holding to what he had said when going into exile, "Quand le droit rentrera en France, je rentrerai."

Hugo published in the "Rappel," in 1870, a strong protest against the *plébiscite* of that year, for which he was cited to appear and answer on the charge of exciting hatred and contempt of the Government, but in September following the empire was overthrown, and Hugo went home to share the misfortunes of his country. His first public act was to address a manifesto to the German armies, urging them to make peace with France and proclaim a Teutonic republic. He remained in Paris during the siege, and contributed liberally to the defense of the city and to sanitary work. Against his will he was appointed a member of the Committee of Public Safety. February, 1871, he was chosen as representative of the department of the Seine in the National Assembly at Bordeaux. He strongly opposed the preliminaries of peace with Germany, and resigned because the majority would not listen to his protests. He was in Paris for a few days during the Commune, and spoke and wrote in defense of the Vendôme column; but he went to Brussels on private business, and there denounced the action taken by the Belgian Government against the leaders of the revolt. As a consequence of his action he was expelled, and on his return to Paris, after a short visit to London, he was active in behalf of Henri Rochefort, and in the following election he was defeated.

Hugo lost one of his sons in 1871, and the other in 1873; but neither public nor private calamity interfered with his intellectual activity. In 1872 appeared "L'année terrible," a poem on the misfortunes of France, and in 1873 he produced a poem called "La libération du territoire." In 1874, "Quatre-vingt-treize," a romance of La Vendée in the revolutionary era, was published in eight languages; in 1875, "Actes et paroles pendant l'exil" was issued, a collection of speeches, public letters, and professions of faith. The same year he wrote "Le délégué de Paris aux délégués des 36,000 communes de France." In 1876 he published the second part of "La légende des siècles," and was elected to the senate. In 1877 appeared "L'histoire d'un crime," the story of the *coup d'état* of Dec. 2, 1851, and "L'art d'être grande-père," both of which achieved great success, the latter being regarded by many, on account of the tenderness of the theme, as the best of the work of his old age. "Le Pape" was published in 1878; "La pitié suprême," in 1879; "L'âne," in 1880; "Les quatre vents de l'esprit," in 1881; "Torquemada," in 1882; the third part of "La légende des siècles" and "L'Archipel de la Manche," in 1883. The first and second of these are regarded as of no great value; the fourth and fifth take rank with the poet's best works.

Hugo was poor in his youth; the success of "Les misérables" made him independent; and after his return to France he became wealthy. He was a feeble child, but developed into a strong and handsome boy and a robust and majestic-looking old man. He was a royalist in his youth, a Bonapartist in early manhood, and a republican, almost a socialist, as he advanced in years; but it has been said that he was never false to liberty. He was brought up without religious faith; after some years he took Lamennais for a father confessor; and, finally, he died without the formal consolations of religion. He was not always true as a husband, and sometimes showed himself over-stern as a parent; but he played the part of grandfather to perfection. His brother and one of his daughters went mad; and though he kept the even balance of his intellect in the affairs of life, there was a touch of insanity in his art. He boasted of noble blood, but delighted in the daily exercise of a skill in manual labor that would not have discredited the handicraftsmen from whom he was descended. His days were stormy, but they closed in peace and honor. His eightieth birthday was like a national *fête;* his countrymen hailed him as the greatest poet of France, and the singers of the world did homage to him as the master-spirit of the age. When he died, the nation gave him a public funeral; and he who had entered public life as the pet of a Bourbon king, passed away as the idol of the French Republic.

HYDROPHOBIA. Within the past year, the etiological history of rabies has been brought very near its conclusion, through the labors of the French *savant*, Louis Pasteur. Up to this time, many writers have denied that rabies is a contagious disease—by which is meant, a disease whose origin is lost to us, and which in our day only develops in an animal organism, never outside of it, and can only be communicated by means of material from a diseased animal, either by what is termed natural infection, or by accident, or by intentional inoculation. M. Pasteur has proved that rabies is a contagious disease, pure and simple.

In one important respect, rabies under natural conditions differs from all other known contagious diseases: viz., the uncertainty and irregularity of what is known as the period of latency. The extreme limits of this period are considered to be from thirty days to two years, although some apocryphal cases have been reported where the period was longer. It has been asserted that when the period of generalization begins, the bitten dog is frequently seen to gnaw at the seat of the original wound, and that human beings under the same circumstances have complained of similar sensations, and that such places again become reddened as if irritated. Judging from our observations, we must conclude that the infectious elements must remain localized during the period of latency; when any constitutional disturbance appears, it is an indication that these elements have begun to proliferate, and to be dispersed over the organism, when they manifest themselves by disturbance of the phenomena of those parts for which they seem to have the greatest physiological affinity, which in rabies are the great nerve-centers, the brain and the spinal cord.

It is due to Pasteur that we now know exactly the actual duration of the period of incubation in canine rabies. He assumed that, as the most striking phenomena in this disease were disturbances in the functions of the great nervous centers, these offered the best localities from which to obtain material for the end desired. In assuming the nervous centers to be the only or chief seat of the rabid virus, there is some reason to believe, from clinical evidence alone, that Pasteur has gone too far. It is a well-known fact that the saliva of the rabid dog is, in general, the only medium by which rabies is communicated to other animals through a bite. This saliva is full of all kinds of microbic organisms, and to isolate any specific one, as in rabies, especially when it is supposed to be a coccus, from such material, would be a matter of the extremest difficulty, though always possible. Nevertheless, the saliva does contain the rabid elements, beyond all doubt. These elements must be in it before it enters the mouth, so that we are justified in concluding that they must be contained in the great salivary glands, in fully as pure and powerful a condition as in the nervous material of the brain and cord. It seems to have been an oversight not to place salivary fistulæ on the ducts of these glands in rabid animals, and lead their contents into appropriately sterilized receivers. The glands themselves should be used as material for examination and cultivation; the medium for the same should be their secretions, which can be used in either a solid or liquid form. M. Pasteur not only assured the writer that he had never been able to discover any specific microbe in rabies, far less cultivate it and produce the disease with it—as did also M. le Dr. Roux, his assistant—but expressed the greatest skepticism with regard to some so-called successful experiments made by Dr. Fol of Geneva, recently published in abstract. In the face of such assertions, it has been published that "the microbe of the saliva is very easily cultivated, and successive cultures can be easily made in veal infusions"; that Thuillier, the lamented assistant of Pasteur, who died of cholera in Egypt in 1884, "had had the patience to make eighty cultures in contact with the air, and eighty cultures in vacuum; and the eightieth culture killed as quickly as the first."

Pasteur, looking upon the nervous elements of the brain and spinal cord as the chief seat of the disease-producing elements in rabies, proved this idea to be correct by inoculating healthy dogs in the brain with brain-substance from rabid ones. The method of performing this operation is the same as that resorted to in ordinary trephining of the cranium—i. e., the skin is first cut through down on to the bone; then, with a trephining instrument having the diameter of a common lead-pencil, a round piece of the skull is removed very carefully so as not to disturb the membranes underneath. The brain-substance from the rabid dog is then removed by cutting into the brain with a sterilized knife, and then making a side cut into the same with another, and removing a small piece, which is carefully rubbed up in sterilized bouillon or distilled water. The fluid must not be filtered. A common morphine syringe is then filled, the needle being curved, and an amount of fluid corresponding to two or three divisions of the piston carefully injected under the cerebral membranes. The result was that rabies appeared in dogs thus treated in fourteen days, which goes to prove that the real incubation-period of canine rabies is about fourteen days. On trying the experiments with rabbits, it was found that the period of canine rabies in rabbits is also fourteen days. It then occurred to Pasteur to try similar experiments on monkeys, on account of their zoölogical connection with the human species. The results of these experiments were very astonishing. There was no development of any of the phenomena of rabies, or hydrophobia, in the manner expected; the symptoms were much milder than in dogs, rabbits, or human beings. As experimentation with the etiological elements in some other diseases had shown that in some animals they either augmented or decreased in virulence by being passed through several animals of a given species, Pasteur resolved to try this with monkeys, and found that it was only necessary to pass rabid material from monkey to monkey, through a very small number, in order to have it entirely lose its virulence. Here was an opportunity to procure a "primary" or weak vaccine, had it not been impossible from the scarcity and high price of monkeys. Rabbits were again resorted to, and, after trying hundreds of them, it was found that a form of rabies was produced which had a regular period of incubation of but seven days. It is necessary again to call to mind the fact that, in canine rabies, this period is of fourteen days' duration, because, if hydrophobia should follow the preventive treatment of Pasteur in a human being, if it is due to the bite from the dog, by inoculating a dog or rabbit with brain-substance from said person, the animal inoculated would show the characteristic symptoms in fourteen days or thereabout, while if due to the inoculated virus the disease would appear in the animal in about seven days.

The next question is, How can this very virulent rabbit material be made less virulent, until a negative condition is obtained, so that it can be safely used as a virus for preventive inoculation? Experience has shown that heat and the action of the oxygen in the air had frequently produced this effect with other forms of virus. As the cerebral substance is not in a convenient shape for such manipulation, the medulla oblongata offered itself as the nearest portion of the cord to the brain, as well as the easiest portion to be got at. It was also necessary to have some way of removing or absorbing the moisture as rapidly as possible from the nervous material. To this end, glass jars, holding about a quart, with the finest and closest fitting corks, are necessary; and they must be carefully washed and sterilized. Each jar is then filled about one third with the driest of caustic potash, in lumps, which on account of its affinity for moisture absorbs all that may be in the air and that in the nerve-substance. In each jar is then hung, from the bottom of the cork, by a thread, the medulla oblongata from a rabbit that has died of rabbit rabies. When the jars are placed in a very cool room, the nervous substance retains its virulence for a long time, which may be increased by filling the jars with carbonic-acid gas. On the other hand, if the jars are placed in a room having a constant temperature of 20° C., the medullas will be found to lose in virulence, until at the end of about fourteen days such changes have taken place in the medullary substance that inoculations with it in the sub-membranal space of rabbits' or dogs' brains are not followed by any perceptible effects.

Medullas thus treated give us, then, a "primary vaccine" that can be used in preventive inoculation. If we take 100 medullas, representing an equal number of rabbits that have perished from the seven-day or rabbit rabies, and subject them all to this treatment, we shall find that each medulla has approximately the same degree of virulence, if they have been subjected to the action of the hot dry air for the same number of days. The results of hundreds of experiments prove the correctness of this statement. If we take a given number of dogs and treat them for ten days with a virus made from cords that have been treated in the above-described manner, and permit a month to elapse in order to satisfy ourselves that inoculated or rabbit rabies is no longer possible, and then permit these same dogs to be bitten by known rabid dogs; and if we take another given number and treat them in the same preventive manner, allowing a similar period to elapse, and inoculate them with fresh medullary substance from rabbits that have died of rabies—we shall find that the dogs in each case remain perfectly free from any outbreak of rabies. If at the same time we take brain-substance from the rabid dogs that we allowed to bite the inoculated ones, or a portion of the medullary substance from the rabid rabbits that we used for the test inoculations, and again inoculate healthy dogs or rabbits as a control experiment, we shall find that these animals will invariably die in either seven or fourteen days, according to the material used. The same will be found to be the case if we take the same number of non-inoculated, healthy dogs and permit the same rabid dogs to bite them that we used in the first experiment; the non-treated dogs will all die of rabies in course of time.

The same method of treatment has been found of equal value in preventing the outbreak of hydrophobia in human beings, if it is resorted to within ten or even twenty days from the time they were bitten. After that period it is not reliable. For grown persons an entire syringeful is used; for children under fourteen half as much. The substance is not introduced into the brain, but under the skin, in the same manner as a solution of morphine. The procedure is best illustrated by quoting from the "Comptes Rendus" of October, 1885.

The first person treated by Pasteur was the Alsatian boy, Joseph Meister, aged nine, and we have the *savant* himself as authority for the dog that injured the child having been indeed rabid. The inoculation began on the 7th of July, 1885, and proceeded as follows:

DATE.	Time of inoculation.	Day upon which rabbit was inoculated from which the spinal cord was taken.	No. of days the cord was dried after removal.
July 7......	9 A. M.	June 23, 1885.	14
July 7......	6 P. M.	June 25, 1885.	12
July 8......	9 A. M.	June 27, 1885.	11
July 8......	6 P. M.	June 29, 1885.	9
July 9......	11 A. M.	July 1, 1885.	8
July 10.....	11 A. M.	July 3, 1885.	6
July 11.....	11 A. M.	July 5, 1885.	7
July 12.....	11 A. M.	July 7, 1885.	5
July 13.....	11 A. M.	July 9, 1885.	4
July 14.....	11 A. M.	July 11, 1885.	3
July 15.....	11 A. M.	July 13, 1885.	2
July 16.....	11 A. M.	July 15, 1885.	1

It will thus be seen that this child was daily inoculated with a piece of spinal cord from a rabbit of ever-increasing virulence. The cords were subjected to the action of a dry atmosphere a shorter and shorter period after their removal from the rabbit, until finally a cord comparatively fresh—that is, only one day old—was used. At the same time the child was inoculated, another rabbit was immediately afterward inoculated with exactly the same material used on the child on the same day. This is done with the virus used on every person inoculated by M. Pasteur, in order to keep the experiments under the most exact control. The result is thus reported by M. Pasteur:

> The medullas or cords which were removed from rabbits and inoculated on the child July 11, 12, 14, 15, and 16 respectively—that is, which had been desiccated seven, five, four, three, two, and one day—all gave positive results when reinoculated upon rabbits in a degree corresponding to the time they had been dried—i. e., the freshest cords caused the appearance of rabies in the rabbits in 7 and 8 days, while the others gave results later, and the driest gave none.

The fresh cords having therefore caused the outbreak of rabies in the regular time that the most virulent cords from rabbits had previously taken, and not having caused any disturbances whatever to appear in the boy, Pasteur concludes that "the boy has not only escaped a future outbreak of canine rabies, but also that the systematic inoculation has so prepared the elements of his body that they were enabled to resist the action of the still more virulent rabbit rabies."

The inference from all these observations and experiments seems to be that the best way to prevent hydrophobia in man is to render rabies impossible in dogs, by making it a legal requirement that all dogs must not only be licensed, but be subjected to this preventive inoculation. The next important step to be looked for in the study of this question is the discovery of the specific microbe; its extra-organismal cultivation; the production of rabies by inoculating animals with such material; and the discovery of a method of treating it that will give us a preventive virus that we can produce in any desired quantity, at all times, without recourse to rabbits or other animals.

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IDAHO. Territorial Government.—The following were the Territorial officers during the year: Governor, William N. Bunn, succeeded by Edward A. Stevenson; Secretary, E. J. Curtis; Comptroller and Superintendent of Public Instruction, James L. Onderdonk, succeeded by Silas W. Moody; Treasurer, John Huntoon, succeeded by Joseph Perrault; Attorney-General, D. P. B. Pride. Judiciary, Supreme Court: Chief Justice, John T. Morgan, succeeded by James B. Hays; Associate Justices, Norman Buck and Case Broderick.

Legislative Session.—The Legislature, which was in session at the beginning of the year, adjourned early in February. Tho following are the principal acts passed:

Dividing Oneida County and creating Bingham County.

To amend an act entitled "An act to fix the amount of official bonds of certain county and precinct officers."

Amending an act relating to killing game and catching fish.

Memorial relating to Nez-Percé Indian reservation.

Repealing the registration law.

Removing county-seat of Shoshone County from Pierce City to Murray.

Creating the office of Territorial Attorney-General.

Relating to graded schools in the city of Lewiston.

To change the time of meeting of the Legislative Assembly.

Providing for construction and maintenance of Boisé Valley and Atlanta wagon-road.

Providing for issuing bonds for the erection of school-building in the city of Bellevue.

Authorizing the commissioners of Custer County to construct a jail and hospital.

Providing for holding elections, and prescribing qualifications of electors.

For the relief of Kootenai County.

To prevent vagrancy.

Relating to limited partnerships.

Authorizing the commissioners of Bingham County to issue and negotiate bonds.

Relating to Lewis Collegiate Institute.

To provide for the erection of a Capitol building in Boisé City.

Relating to the destruction of wild animals.

Regulating trespassing of hogs.

To provide a uniform system of county and Territorial revenue, and for assessing and collecting it.

Regulating adoption of minor children.

Providing for taxation of stock owned in adjoining States and Territories and grazed in this Territory.

For better maintenance of indigent sick, idiotic, and insane persons in the several counties.

To establish boards of health.

To amend an act entitled "An act to incorporate Boisé City."

To incorporate the city of Bellevue.

Authorizing the county of Cassia to issue and negotiate bonds.

Readjusting and apportioning the representatives to the Houses of the Legislative Assembly for the several counties.

To provide for election of county commissioners.

Relating to the location and recording of mining claims.
Regulating inclosures.
To prevent the sale of oleomargarine, butterine, etc.
Regulating roads, highways, and thoroughfares.
Concerning chattel mortgages.
To regulate partition fences.
To provide for auctioneers.
Establishing district courts in each organized district.
For the relief of insolvent debtors.
Relating to Territorial revenue.
To protect owners of saw-logs, etc.
To repeal an act changing time of meeting of Legislative Assembly.
To protect the rights of married women.
Relating to the incorporations of towns and villages.
Amendatory to the reapportionment law.
Amending the general school law.
A supplemental act relating to the creation of Bingham County.
Amendatory to the law regulating the distribution of water for irrigation.
Amending the revenue law.
To provide a punishment for a false assay, etc.
To create a prison commission for the Territory.
To provide for the revision and compilation of the statute laws of Idaho.
To amend the law touching scab on sheep, etc.
Amendatory of the law relating to conveyances.

Under the Capitol bill, the money is to be raised by issuing bonds drawing 6 per cent. interest, to run twenty years, with the privilege of redeeming them after ten years. The sum of $80,000 is to be expended in the erection of a Capitol building on the Capitol Block in Boisé City, and $20,000 in the erection of an insane asylum at Blackfoot, in Oneida County. Chief-Justice Hays decided, at the August term of court in Cassia County, that the election law which disfranchises the Mormons and disqualifies them from sitting on juries is valid and constitutional, sustaining the opinion of ex-Chief-Justice Morgan.

Population and General Character.—The Governor, in his report to the Secretary of the Interior, dated Oct. 26, estimates the population at 75,000. He classifies the area as follows: "That which may be considered suitable for agricultural purposes in their present state, 12,000,000 to 15,000,000 acres; that which is capable of being reclaimed by irrigation with the available water now flowing in the streams, from 10,000,000 to 12,000,000 acres; the natural pasturage or grazing lands will reach fully 5,000,000 acres, though a very considerable area of the land designated and described as agricultural lands is well adapted and is at present used for grazing; there are about 10,000,000 acres of timber-land, and about 8,000,000 acres of mineral land. It is quite safe to estimate 5.000,000 acres of mountain, desert, and volcanic formation, entirely unfit for any use except that designed by nature, but being utterly destitute of mineral, timber, or vegetation of any nature which can be made tributary to the wants of man or beast."

Agriculture and Stock-raising.—More than a third of the population are engaged in farming and stock-raising. The crops of the year did not much exceed half of those of 1884 in average yield, except in a few localities, though, owing to the progress of settlements, the total product of wheat, barley, oats, and rye was greater than ever before. The crops are more than sufficient to supply the home wants. Corn is not successfully raised. Hay gives a fair yield. Fruits grow well. The following are the chief agricultural counties: Ada, Cassia, Idaho, Bear Lake, Nez-Percé, Oneida, and Washington. The lands still open to settlement are very extensive. Settlement is retarded in some quarters by lack of Government surveys, settlers on unsurveyed lands having only precarious rights.

The live-stock interests of Idaho are steadily advancing in comparative rank and importance among the resources of the Territory. During the year the losses from exposure and from disease combined did not exceed 2 per cent. of the herds that thrive summer and winter upon the open ranges. It is estimated that fully 400,000 head of horses and cattle annually graze in the Territory, the aggregate value of which would equal nearly $15,000,000. The number of sheep probably exceeds 200,000 head, and the wool-clip for the year approximates 1,000,000 pounds, the average price received by flock-owners ranging from twelve to thirteen cents a pound. The number of swine is not great, perhaps not exceeding 40,000 head, but is increasing. The exports of live-stock from shipping-stations on the Oregon Short Line Railroad in Idaho, during the year 1885, aggregate 1,800 car-loads, or 36,000 head of horses and cattle. The imports by the same line, including improved breeding-stock, amounted to 200 car-loads, or about 4,000 head.

Mining.—On this subject the Governor says: "The mineral resources of the Territory constitute, if not its chief, one of its greatest interests, and to the extent to which the gold- and silver-bearing lodes are worked the mining interests are in a very prosperous condition. New and rich mineral districts are being discovered and explored, prospected, and worked with great success. Among the most noted gold and silver districts may be mentioned the Wood river mineral belt, extending up and down that stream for more than sixty miles. The ores taken from the mines on Wood river are mostly silver smelting-ores, running in silver from 100 ounces to 350 ounces, and carrying a per cent. in lead from 45 to 76. The great Salmon river basin continues its output in gold and silver as in former years. The new mining district, known as Lava district, is fast coming to the front. The district known as the Saw-tooth contains rich and extensive silver-mines; but the shortness of the season and the severity of the winters have retarded the working and development of the mines in that camp. From the most reliable data at hand, it may be asserted that there are now over 200 dividend-paying mines in the Territory. As the work of development and exploration proceeds in the mineral district in Washington County, daily proof of the richness of the mines in that locality becomes more and more manifest. . The rich placer-mines are now more extensive than ever before in Idaho."

The Cœur d'Alene well deserves the most favorable mention, not only for its rich mineral locations, but for the enterprise of the people who have overcome every obstacle of climate and season. "A system of roads has been opened, towns built, communities formed, new mineral discoveries made, and rich and inexhaustible mines and placers opened. The rich and extensive copper-mines, known as the Peacock group, were discovered in 1862; but little work was done until 1874, when they were relocated and thoroughly prospected. They are a few miles from Snake river, 4,000 feet above the river. The ore runs high in copper and carries also a high per cent. in silver. Twenty miles south of these great mines lies the well-known Heath district, which stands now at the head of the dividend-paying camps of that section. On the Middle Weiser, and within a short distance of the copper-mines, lie the famous mica-mines. They were discovered some years ago, but, owing to the great distance from the railroad, and the cost of transportation to an Eastern market, the owners did little more than work enough to comply with the law in protecting their titles, but since the construction of the Oregon Short Line Railroad they are brought within easy access. The Lost river copper-mines are said to be marvelously rich. Custer County is where the great Custer mine and the Bay Horse district are situated, in which district the Ramshorn mine is also located."

The Governor estimates the gold and silver product for the year at $5,486,000. In his report for 1884, the Director of the Mint places the production of precious metals in Idaho at $3,970,000. Of this amount $1,250,000 was gold, and $2,720,000 silver. The total productions by counties are as follows: Ada, $5,000; Alturas, $1,555,000; Boisé, $440,000; Cassia, $5,000; Custer, $1.200,000; Idaho, $110,000; Lemhi, $95.000; Nez-Percé, $500; Oneida, $4,500; Owyhee, $300,000; Shoshone, $250,000; Washington, $10,000.

Financial.—In 1872 the Territorial indebtedness was $132,217.71. The present indebtedness of the Territory is as follows:

Bonds due Dec. 1, 1885	$22.553 55
Bonds due Dec. 1, 1891	46,715 05
Total	$69,268 60

The cash on hand at the end of the fiscal year was $74.814.90, an excess over indebtedness at that date of $5,546.30. In addition to the above, the last session of the Legislature authorized the issuance of $80,000 in 7 per cent. bonds for the erecting of a Capitol building at Boisé City; and $20,000 for an insane asylum at Blackfoot, in Bingham County. The Capitol bonds are twenty-year bonds, the Territory, however, reserving the right to pay them any time after ten years. Five thousand dollars of the asylum bonds become due Dec. 1, 1892, and $5,000 annually thereafter until all are paid. These bonds were taken by New York capitalists at par. The total receipts from all sources for the fiscal year ending April 1, 1884, were $32,146.90; for 1885, $59,859.76, an increase in one year of $27,712.86.

Education.—The following is a summary of school statistics for the year ending Aug. 31, 1885:

Number of boys of school age	8,013
Number of girls of school age	7,386
Total number of children of school age	15,399
Total number of school age the previous year	13,140
Number of districts in which schools have been taught three months or more	253
Cash paid for teachers' salaries	$76.301 78
Average salary per month	61 53
Expended for sites, buildings, repairs, and furniture	29,374 46
Expended for libraries, school apparatus, and interest	3,934 56
Expended for rent, fuel, and contingent expenses	13,757 26
Disbursed for all purposes	123,368 06

The balance on hand at the beginning of the year was $22,489.23.

There are graded schools in Boisé City, Lewiston, and a few other places. The Lewis Collegiate Institute (Methodist Episcopal), at Lewiston, has primary, higher, commercial, and normal courses.

Reclamation of Desert Land.—Of the importance of this work the Governor says:

> The millions of acres of land suitable for agricultural purposes can only be made productive by a system of irrigation, and this can only be accomplished by the most liberal policy of the Government in continuing the act known as the desert-land law. Hundreds of thousands of acres that were but barren wastes a few years ago, by joint and individual enterprise and the liberal expenditure of capital in irrigation, have been brought into a high state of cultivation, where thousands of people have laid the permanent foundation for happy and prosperous homes. The late rulings of the Commissioner of the Land-Office, requiring each settler on a desert-land claim not only to bring water on the whole of such claim, but actually to cultivate and raise a crop on every fractional part of his claim, can hardly be interpreted in the light of liberal encouragement to the poor and honest settler, who with scant means seeks to build a home for himself and family on desert land.
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> In Bingham County, by means of a canal, 60,000 acres of waste and desert land are brought under conditions for settlement and cultivation. On the south side of Snake and Raft rivers, Goose creek, and other streams, irrigating canals have been constructed, which reclaim hundreds of thousands of acres. In Alturas County a large settlement of farmers is supplied by means of irrigation. In the Bruneau valley similar schemes are working successfully.
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> The Idaho Mining and Irrigating Company of New York is now engaged in the work of constructing a canal which will supply an amount of water equal to 4,000 cubic feet a second. It taps Boisé river just south of Boisé City, and commands the broad plain north of the Snake river for more than 50 miles, and will reclaim between 400,000 and 600,000 acres. There are already some two canals on Peyette river which will reclaim between 60,000 and 80,000 acres.

County Finances.—The total bonded indebtedness of counties is $216,200 (Ada, $86,200; Alturas, $40,000; Bingham, $90,000), at 6, 7, and 8 per cent.; floating debt, $676,749.24; cash in treasuries, $100,546.59; value of county property, $326,512.28.

ILLINOIS. State Government.—The following were the State officers during the year: Governor, Richard J. Oglesby, Republican; Lieutenant-Governor, John C. Smith; Secretary of State, Henry D. Dement; Auditor, Charles P. Swigert; Treasurer, Jacob Gross; Attorney-General, George Hunt; Superintendent of Public Instruction, Henry Raab; Railroad and Warehouse Commissioners, John J. Rinaker, B. F. Marsh, and W. T. Johnson. Judiciary, Supreme Court: Chief-Justice, Benjamin R. Sheldon; Associate Justices, Alfred M. Craig, John M. Scholfield, T. Lyle Dickey, Pinkney H. Walker, John H. Malkey, and John M. Scott.

Legislative Session.—The Legislature met on the 7th of January and adjourned on the 26th of June, after a session of 171 days, four days longer than the next preceding session, which was twenty days longer than its predecessor. The first day of the session witnessed a dead-lock in the election for Speaker of the House.

The session began with 26 Republicans and 25 Democrats in the Senate, a relation which was maintained to the end. The House met with 76 Republicans, 76 Democrats, and 1 Independent (Haines), and thus it continued until Feb. 26, when Judge Robert E. Logan (Republican) fell dead at the door of the House. He was succeeded by D. S. Spafford, also a Republican. The dead-lock was terminated Jan. 29, by the election of Elijah M. Haines as Speaker, the Democrats being compelled to abandon their regular nominee. Haines thereafter acted with the Democrats.

On the evening of Feb. 4 the Democratic joint caucus nominated Congressman William R. Morrison for United States Senator, and the next evening the Republicans nominated Gen. John A. Logan. Then began a remarkable contest. Each party had 102 votes. The balloting began Feb. 13, and ran on, day after day, until May 19, when Gen. Logan was elected. On the morning of April 12, Representative J. Henry Shaw, Democrat, of the Thirty-fourth District, was found dead in his bed at his hotel in Springfield. This left the Democrats with 101 votes, and they refused to vote again till the Shaw vacancy should be filled. The election for that purpose was ordered for May 6, and the Democrats nominated W. H. Leeper, of Cass County. They estimated the district to be Democratic by about 2,000 majority; but on the morning of May 7 the returns indicated that W. H. Weaver (Republican), of Menard County, had been chosen. Then followed endeavors on the part of the Democrats to delay the seating of Weaver, and, in the mean time, to secure the election of a Democrat as Senator. In this effort it has been charged that corrupt advances were made to at least two Republicans. At last Morrison was withdrawn and Judge Lambert Tree nominated in his stead; but only 101 votes were obtained for him. Finally, on the afternoon of Friday, May 15, Weaver was admitted to his seat, and the Republicans, for the first time, had 103 votes, just enough to elect if they all voted together. No attempt was made to reach a ballot till May 19, when every member on each side was in his seat, and the first ballot showed 103 for Logan. The Republicans now had a majority of one in each branch, and legislation proceeded.

Among the more important acts of the session were the following:

To protect all citizens in civil and legal rights, and fixing a penalty for violation of the same. This act is equivalent to the United States law that was declared unconstitutional by the United States Supreme Court.

To amend the law in relation to criminal jurisprudence, fixing the punishment for burglary at imprisonment for life, in the discretion of the court, in cases where a burglar enters the premises at night carrying a deadly weapon, or anæsthetic, and making the minimum confinement ten years.

To amend sections 12 and 13 of an act entitled "An act in relation to fencing and operating railroads," approved March 31, 1874. It compels railroad companies to stop trains within 800 feet of a railroad-crossing, instead of 400 feet.

Regulating the holding of elections, and declaring the result thereof in cities, villages, and incorporated towns in this State. This is what is known as the Citizens' Elections Bill, and is one of the most important bills passed during the session. It provides that no election district shall include more than 450 voters, and "that the polling-places shall, in all cases, be upon the ground-floor in the front room, the entrance to which is from a highway or a public street, which is at least forty feet wide, and as near the center of the voting population of the district as is practicable, and for the convenience of the greatest number of electors to vote thereat; and in no case shall an election be held in any room used or occupied as a saloon, dramshop, billiard-hall, bowling-alley, or as a place of resort for idlers or disreputable persons, or any room connected therewith by open doors or hallways. No person shall be permitted to vote at any election except in the district where he resides. That every person elected or chosen judge of elections shall be of fair character, approved integrity, well-informed, who can read, write, and speak the English language, and has resided in the election district in which he is to serve for one year next preceding the election, and is entitled to vote therein at such election." There are to be three clerks, not more than two of whom are to belong to the same political party, and having the same qualifications as the judges. Additional safeguards are enacted to secure a fair and impartial canvass of the ballots.

To regulate primary elections of voluntary political associations, and to punish frauds therein. This bill is designed to prevent frauds at primary elections, and the provisions against such frauds are very similar to those in the ordinary election law. Voters at a primary must have the same qualifications as at a regular election, and additional requirements may be imposed by the party or other political organization. The bill provides also that the polls must be kept open from 12 o'clock noon to 7 o'clock P. M.

To amend certain sections of an act in regard to elections, and to provide for filling vacancies in elective offices, approved April 3, 1872, and in force July 1, 1872. This provides that the election precincts shall not contain more than 400 voters.

To provide for the payment of fines in money, upon all prosecutions for cruelty to animals or children; to the support of societies for the prevention of cruelty to animals or children or humane societies.

To establish and maintain a Soldiers' and Sailors' Home in the State of Illinois. Appropriates $200,000.

To amend an act entitled "An act to provide for the reorganization of the State militia, and entitled 'The Military Code of Illinois.'" Appropriates $245,000.

Appropriating $528,600 for the Hospital for the Insane at Kankakee.

To promote the science of medicine and surgery in the State of Illinois. This provides that all persons dying without funds to bury them shall be given to medical colleges and students of medicine for dissection.

Appropriating $228,555 for the Hospital for the Insane at Elgin.

Appropriating, for the expenses of the Normal University at Normal, in addition to one half interest on the college fund, $23,500.

Appropriating $50,000 for the Penitentiary at Joliet.

To protect the public from imposition in relation to canned and preserved food. This is known as the "Soaked Canned Goods Bill," and provides that when goods are soaked before being canned they shall be so marked upon the label.

To authorize the formation of companies for the detection and apprehension of horse-thieves and other felons.

Making an appropriation for completing, continuing, and displaying the Illinois exhibit at the Exposition at New Orleans.

To protect persons and property from damages from steam-engines on public highways.

To revive and amend an act and certain sections thereof, entitled "An act for the construction, reparation, and protection of drains, ditches, and levees across the lands of others for agricultural, sanitary, and mining purposes, and to provide for the organization of drainage districts."

Appropriating $2,872,924 for the expenses of the State government until the expiration of the fiscal quarter after the adjournment of the next regular session of the General Assembly.

A joint resolution was passed creating a revenue commission. This measure sets forth the general inadequacy of the revenue laws to secure the equal and just taxation of the property of the State, and provides "that the Governor is hereby authorized and directed to appoint a committee of twelve men, an equal number of whom shall be of the two leading political parties of the State, with authority to propose and frame a revenue code which, in their opinion and best judgment, shall be of practical execution, and shall be just to all classes of property and in keeping with our complicated system of business, commerce, and individual or corporate avocations, and report the same to the next General Assembly of the State of Illinois. That said committee shall meet on the first Wednesday of September, 1885, and shall organize by the election of one of their number as chairman, and one competent person as stenographic clerk. That on or before the 1st day of March, 1886, said committee shall furnish to the Secretary of State a true copy of their report, which the Secretary shall at once cause to be printed and distributed. Each member of the committee shall receive for his services and entire expenses ten dollars for every day employed, not to exceed ninety, and the said clerk shall receive six dollars a day for every day employed by said committee. Said commission shall have power to send for persons and papers, and take such testimony as they may deem proper."

Labor Convention.—The State Labor Convention, representing the various trades and labor organizations of Illinois, met in Springfield in February, and agreed upon the following demands, "assuring our law-makers that our ballots and demands go hand in hand":

The total abolition of convict contract labor.

That better laws be provided for the better protection of railroad employés and miners.

We favor the enactment of laws providing for coöperative associations as distinguished from those governing joint-stock companies.

We favor the enactment of a law establishing an arbitration board, said board to settle all disputes between employer and employé, their decision to be final in all cases.

We demand the enforcement of the compulsory education bill, now on our statute-books, and favor a penalty for any violation of said law.

We favor the enactment of a law whereby pupils attending public schools shall be furnished with all books, etc., required by them, free of charge; such books, etc., to be furnished by the State.

We favor the enactment of a law establishing a State printing-office for the purpose of printing all books, etc., required in our public schools; and also to furnish all printed material needed in all State institutions.

The abolition of what is known as the conspiracy or La Salle black law, and the passage of a statutory enactment declaring illegal all iron-clad contracts which deprive workmen of the privilege of membership in any peacefully conducted trade organization.

We favor the abolition of the truck system, and laws providing weekly payments for work performed.

We demand the enforcement of the eight-hour law now on our statute-books, and a penalty attached for any violation of said law by either employer or employé.

We favor the enactment of a law prohibiting gambling, etc., in the necessaries of life.

The enactment of laws prohibiting non-residents holding lands.

We favor the enactment of laws whereby railroads and water-ways shall be controlled by the General Government.

The enactment of laws providing for the inspectors of workshops, factories, tenement-houses, and dwellings, to insure the sanitary condition thereof, and that rigid measures be taken for the protection of the people against adulteration of food and drugs, and a penalty attached for their adulteration.

The enactment of an efficient apprenticeship law.

Coal-mining.—It is ascertained that the amount of capital invested in the mining industry in Illinois is $9,898,950, an investment exceeded only by three other industries, viz., milling, the manufacture of agricultural implements, and meat-packing. This is about $1,600,000 more than reported in 1882. Notwithstanding a considerable increase in the number of mine-openings, there has been a decided decrease in the total output of the State as compared with the two preceding years. The tonnage for 1884 was 10,109,000; in 1885 it was 9,791,874. While a somewhat general business depression undoubtedly operated to diminish the coal product, the greater portion of the decrease is traceable to the strikes in the Third and Fourth Districts, which were the longest and involved the greatest number of men of any strikes of the year. There was a suspension in the Ellsworth Company's mines in Macoupin and Madison Counties, lasting over three months, and in its mines in the vicinity of Danville four months. These strikes extended to a few neighboring mines, and altogether involved a total idleness of 1,700 men for three months. Up to the beginning of these strikes there had been an increase of the coal product of these mines as compared with the preceding year. The data furnished in the reports show that the total shrinkage in the district covered by these strikes amounted to 317,438 tons, or 8,227 tons more than the entire shortage of the State for the year. In other words, it appears that the coal product of Illinois, instead of being 309,131 tons less than last year, would have been at least 8,300 tons more but for this strike.

While 786 mines were worked more or less during the year, about one third of this number, that is, the 287 mines producing coal for the shipping-trade, yielded 9,125,810 tons, or 93 per cent. of the total output, and they furnish employment to 90 per cent. of the miners of the State. These mines were worked a total of 64,610 days, or an average of 225. A table, prepared to determine the working-time of men employed in the manufactures in this State, shows that they obtain an average of 289 days in the year, so that the best-conditioned miners of the State obtain only three fourths as much time as the artisans in the shops.

Chicago.—In November the Supreme Court of the State decided a case that had attracted wide notice, in affirming the conviction of Joseph C. Mackin, a prominent Democratic politician of the city, for perjury. This decision was promptly followed by his incarceration in the State Prison. After the election in November, 1884, the returns in the Sixth Senatorial District were altered, and Mackin was convicted of the crime in the United States court. Pending an appeal to the Federal Supreme Court from this conviction, he was tried in the State court and convicted of perjury committed on the trial in the United States court. It was this last conviction that was affirmed by the Supreme Conrt of the State.

The municipal election in the spring resulted in the choice for another term of Mayor Carter Harrison (Democrat), on the face of the returns, by a small majority. But it was claimed that extensive frauds had produced this result, and his Republican competitor instituted a suit to oust him, which was pending at the close of the year.

The most important result of the November election was the adoption by the people of the city, by a large majority, of the election law described above.

The following is a comparative statement of the amount of revenue derived by the city of Chicago from licenses of all descriptions from 1879 to 1885 inclusive: In 1876 the amount was $214,218, while in 1885 it was $1,916,820. The increase is due to the $500 license. Following is the number of liquor-shops and the revenue derived for the six years: 1879, 2.938, $163,540; 1880, 3,245, $168,740; 1881, 3,603, $182,226; 1882, 3,919, $195,490; 1883, 3,777, $385,864; 1884, 3,184, $1,463,700; 1885, 3,075, $1,721,474.

Armed Processions.—During 1876 and 1877 the Communists of Chicago formed what is still known as Der Lehr und Wehr Verein, the members of which were armed with military rifles. They were formed into sections, procured uniforms, and were drilled by Prussian drill-masters. They publicly paraded on one occasion, during the winter of 1876–'77, 1,500 men fully armed and carrying the red flag. This was apparently intended as an open defiance to the State and its organized National Guard. The Legislature then prohibited any body of men other than the organized militia from drilling or parading with guns except by special license of the Governor. The Communists threatened an open conflict, and announced that they would parade on a specified day. They were warned by the Governor not to do so, and the State military were notified that the service of the troops might be required. The Anarchists receded, but sent out a small detachment to make a test case in the courts. They obtained a strong decision in their favor by a judge elected largely by their votes, who held that under the clause of the Constitution giving the right to bear arms their rights could not be abridged. The Supreme Court of Illinois reversed the decision of the lower court and affirmed the constitutionality of the measure. The case was carried to the Supreme Court of the United States, which, at the opening of 1886, affirmed the judgment of the State Supreme Court, declaring that otherwise the State authorities would not have the power to quell a mob or treasonable uprising. The Socialistic companies still exist, but what drilling they engage in is usually performed secretly.

INDIA, an empire in Asia subject to Great Britain. In 1858 the British Government assumed the government of all the territories of the East India Company. In 1877 the Queen of Great Britain and Ireland took the additional title of Empress of India. The control of Indian affairs is exercised by the Secretary of State for India, who is a member of the British Cabinet. The executive authority is invested in the Governor-General, usually styled Viceroy. The Secretary for India was Lord Randolph Churchill, who succeeded the Earl of Kimberley in June, 1885. The Governor-General is the Earl of Dufferin, who replaced the Marquis of Ripon Oct. 28, 1884. The Secretary of State is aided by a Council of fifteen members, whom he appoints for ten years. The majority of the Council must have served in India for ten years, and have resided there within ten years previous to their appointment.

The Viceroy exercises a political control, varying in degree, over the independent native states, through residents at the courts of the native princes. The authority of the native chiefs is limited by treaty engagements which forbid them to make war or peace, or to send ambassadors to each other or to foreign courts, or to maintain military forces exceeding certain specified limits. Some do and some do not pay tribute.

Area and Population.—The area of the British territories in India is 874,220 square miles; the total population in 1881 was 198,755,993, comprising 187,937,450 Hindoos, 50,121,585 Mohammedans, 6,426,511 pagans, 3,418,875 Buddhists, 1,862,634 Christians, and lesser numbers of Sikhs, Parsees, Jews, and others. Of the Christians 963,059 are returned as Roman Catholics, 304,410 as Syrian Christians, and the rest as Protestants of various sects. The native Christians numbered 893,656.

There are in India 60 towns with over 50,000, and 21 with over 100,000 inhabitants. The largest are Calcutta, containing with its suburbs 871,504 inhabitants; Bombay, with 773,196; Madras, with 405,848; Hyderabad, with 354,692; Lucknow, with 261,303; Benares, with 199,700; and next in order Delhi, Patna, Bangalore, Amritsar, Cawnpore, Lahore, Allahabad, Jeypoor, and Rangoon.

Commerce.—The values of the imports and exports for the five years, ending March 31, 1885, were as follow:

YEARS.	IMPORTS.		EXPORTS.	
	Merchandise.	Treasure.	Merchandise.	Treasure.
1880...	£39,742,166	£11,655,395	£67,173,158	£1,928,828
1881...	50,308,834	8,988,214	74,531,282	1,409,403
1882...	46,992,084	11,322,781	81,901,960	1,097,387
1883...	50,003,040	13,453,157	83,400,864	980,858
1884...	50,723,533	12,877,963	88,021,637	979,758

Of the total imports of 1884, including treasure, the value of £24,436,450 was imported into Bengal, £3,841,941 into British Burmah, £4,780,115 into Madras, and £32,542,987 into Bombay and Sinde. Of the exports £36,213,352 went from Bengal, £6,576,136 from British Burmah, £9,257,924 from Madras, and £36,863,980 from Bombay and Sinde. The imports of bullion and specie in 1884 comprised £5,469,456 in gold and £7,408,506 in silver; the exports, £6,141 in gold and £1,002,352 in silver. The participation of the principal countries in the foreign trade was as follows:

COUNTRIES.	Imports.	Exports.
Great Britain................	£40,365,926	£35,429,872
China and Hong-Kong.......	2,072,037	13,160,106
Straits Settlements..........	1,596,692	3,638,735
United States..............	937,906	3,619,748
Mauritius...................	882,706	592,669
Ceylon......................	573,776	1,392,616
Persia	573,620	1,223,878
France......................	484,367	7,207,962
Australia....................	476,591	1,088,918
Italy.........................	444,433	3,383,508

The values of the principal commodities imported and exported in 1883–'84 were as follow:

IMPORTS.	Value.	EXPORTS.	Value.
Cotton goods...	£25,116.849	Raw cotton....	£14,361,821
Metals.........	5,181,850	Opium.........	11,294,460
Machinery.....	1,791,148	Seeds..........	10,090,198
Railway material..........	1,633,695	Wheat.........	8,879,831
		Rice...........	8,363,280
Liquors........	1,389,387	Hides and skins	4,663,734
Woolens.......	1,218,329	Indigo.........	4,640,990
Sugar..........	1,146,168	Jute...........	4,592,635
Coal...........	1,099,604	Tea............	4,083,880
Silk goods......	1.040,650	Cotton twist...	1,926,162
Provisions.....	1,033,931	Coffee.........	1,438,863
Raw silk.......	969,574	Jute manufactures.........	1,334,143
Clothing........	869.731		
Hardware, etc..	814,471	Cotton goods...	946,998
Salt...........	623,017	Sugar..........	943,218
Spices..........	557,109	Raw silk and cocoons........	637,611
Kerosene.......	520,765		

The exports of raw cotton to Great Britain were 3,668,928 cwt., valued at £20,325,630 in 1874, and 3,414,546 cwt. in 1875, valued at £19,173,275. Prices fell and exports declined to 1,433,104 cwt. in 1878, valued at £3,513,595. In 1883 the exports were 2,327,546 cwt., valued at £5,231,321. The exports of wheat to Great Britain in 1883 were 11,248,088 cwt.; of seeds, chiefly linseed, 2,006,036 quarters; of jute, 7,371,956 cwt.; of rice, 7,376,169 cwt.; of tea, 59,252,435 pounds.

The principal article imported into India from the United States is kerosene, to the amount of $1,990,192 in 1884, gray cottons coming next, of which 694,941 yards, of the value of $51,554, were imported. The largest exports from India to the United States in 1884 were indigo, of the value of $2,600,703; raw jute, $2,251,887; linseed, $2,251,562; raw hides, $1,024,889; raw skins, $965,662; dressed or tanned skins, $775,161; gunny-bags, $753,556; and shellac, $406,016.

The foreign trade of India has greatly expanded within the last few years. Among the imports cotton goods increased in value from 15 to 21 millions sterling between 1874 and 1883, while the native cotton manufacture has doubled. The export trade in wheat grew from less than a million to over six millions; seeds, from 2¼ to 7 millions; tea, from 1¾ to 3¾ millions.

Navigation.—The number of vessels entering the ports of India in 1883–'84 was 5,812, tonnage 3,632,305, as against 3,538.878 tons in 1882–'83; the number that sailed was 5,850, tonnage 3,618,298. Of the tonnage entered, 2,806,426 tons belonged to Great Britain, 176,708 to British India, 83,688 to native states, and 565,483 to foreign countries.

Posts and Telegraphs.—The number of letters forwarded in 1883–'84 was 182,514,520; of journals, 15,848,586; receipts, £1,014,190; expenses, £1,013,429.

The length of telegraph lines in 1884 was 23,341 miles; of wires, 68,694 miles, not including 135 miles of cable; the number of paid dispatches was 1,837,048; receipts, £522,570; expenses, £669.239.

Railroads. — There were completed, by the close of the financial year 1884–'85, 12,004 miles of railroad, 1,218 miles having been constructed during the year. The number of passengers in 1884–'85 was 73,815,119, against 65,098,953 the year before. There were transported 16,663,007 tons of freight. The carriage of grain fell off 500,000 tons. The gross receipts amounted to £8,156,157, the net receipts to £7,910,068, paying something over 5 per cent. interest on the capital, as compared with over 5½ per cent. the year before. Of the total mileage completed, 6,906 miles belonged to companies, 4,434 miles were state lines, imperial or provincial, and 664 miles belonged to native states. There were under construction 3,555 miles: 963 by companies, 2,125 by the state, and 467 by native states. The total capital expended was upward of £155,450,000, of which £105,319,144 had been expended by guaranteed companies, £42,924,893 by the Government, £3,783,065 on native state lines, and £3,423,259 on the lines of assisted companies. An attempt to raise a loan of £3,000,000, in 1885, for the Midland Railway, was unsuccessful, though the Government guaranteed 4 per cent. interest, and offered an interest in the surplus profits. The Sinde-Pishin Railroad, which the Government made extraordinary efforts to construct during the Afghan crisis, is expected to be completed by August, 1886. The lower Bolan section, extending to within 40 miles of Quetta, was opened in October, 1885. The new railroads recently constructed enabled India to export wheat in such quantities as to bring down the price of it to the lowest level known in generations. The roads that conveyed the most wheat were the lines in the Northwest Provinces, Oude, and the Punjaub—built partly for strategic purposes. These lines do not pay interest on their capital, and consequently the Indian export trade in wheat is, to a large extent, stimulated by bounties. As many as 24 new lines were projected by the Liberal Government; but the large expenditure on fortifications and armaments in contemplation will interfere with the execution of this scheme. Many think that the Government risks the recurrence of a disastrous famine by building outlet lines and stimulating the exportation of wheat, instead of providing transverse railroads to carry the grain to the distressed districts in case of a severe and extended drought.

Wheat Production.—The extraordinary increase in the wheat exports in 1883 seriously affected the American wheat trade and greatly aggravated the agricultural depression in Europe. The fear of this new competition was lessened by a more accurate knowledge of the conditions of Indian wheat production, though authorities differ regarding the possible extension of the Indian export trade in wheat. The director of the Agricultural Department of the Northwest Provinces and Oude, where the best wheat-lands are situated, estimates that the cost of raising a bushel of wheat is about 50 cents. The selling price, when exports are large, is about 63 cents. The average yield on dry land is 12 bushels, and on irrigated land, 22 bushels per acre. The distance from the seaboard of the wheat districts of India varies from 300 to 900 miles. The freight charges vary considerably: the price from Delhi to Bombay, 890 miles, being 6*s.* 6*d.* per quarter; from Fyzabad to Calcutta, 598 miles, 5*s.* 2*d.*; from Lahore to Kurrachee, about the same as from Delhi to Bombay; on the Great Indian Peninsular line, somewhat more for a shorter distance; and on the East Indian line, less than on the American wheat roads. The freights to England in 1884 were 7*s.* 9*d.* per quarter from Calcutta, 6*s.* 8*d.* from Bombay, and somewhat higher from Kurrachee. The normal wheat area in India is supposed to be about 26,000,000 acres. In 1884–'85 there was a somewhat larger area devoted to the crop. In the Punjaub the acreage was 7,381,400; in the Northwest Provinces and Oude, 5,298,026; in the Central Provinces, 3,700,000; in Bombay, 2,670,000; in Berar, 819,057; in Behar, 850,000; in Rajpootana, 2,250,000; in Central India, 3,500,000; in Hyderabad, 750,000; in Mysore, 21,740; in Cashmere, 500,000; in Baroda, 80,000. The crop was a fair average one, but owing to the fall in price the exports showed a great falling off. The total quantity exported in 1881–'82 was 993,176 tons; in 1882–'83, 707,220; in 1883–'84, 1,047,824; in 1884–'85, 792,714. Indian wheat is coming into use for Italian paste more than formerly, and the exports to Mediterranean countries show, consequently, the largest increase. The annual yield in good years is about 7,500,000 tons. The area of wheat-culture can be extended and the yield increased by irrigation. The famine commissioners estimated the total extent of waste lands capable of cultivation in British India at 100,000,000 acres. The introduction of agricultural machinery is pronounced impracticable. The land is divided up into farms of about five acres, which are tilled in a thorough manner with the primitive implements of the country. The wages of the Indian laborer are 7 to 10 cents a day. The fertility of the soil could be increased by keeping the cattle in a condition to stir up the soil more deeply, and by restoring the manure to the land instead of burning it for fuel. Notwithstanding the cheapness of labor, the skill of the Hindoo agriculturist, and the richness of the soil, it is doubtful whether Indian wheat can be sold in Europe as cheaply as American wheat. The railway and elevator systems of the United States, and the well-organized methods of business, are a great advantage to the American producer. In India wheat is transferred on the backs of coolies, and a series of middle-men absorb all the profits, unless prices are very high. The Hindoo agriculturist is ground down by the system of rent and land-taxation. The recent activity of the Government in constructing railroads and irrigation canals is likely to cease for some time.

Finances.—The closed accounts for 1883–'84 showed a revenue of £71,727,000, and an expenditure of £70,340,000. The revised estimates for 1884–'85 stated the revenue at £69,992,000, and the expenditure at £70,702,000, the expenditure being greater than the budget estimate by £461,000, and the revenue less by £568,000, owing to trade depression, the falling off in the rice exports from Burmah, and the low price of wheat. Railway receipts consequently fell below the estimate £755,000. The opium-crop was abnormally large, necessitating a larger expenditure; but the opium receipts for the year were better than the estimate, owing to a rise in the price. Irrigation receipts exceeded the estimate. The political charges were enlarged by the expenses of the Boundary Commission. The loss by exchange was £285,000 less than the preceding year. The interest on the debt was increased by £242,000, including £184,000 discount on the new loan of £3,000,000 at 3 per cent. The revenue for 1885–'86 was estimated by Sir Auckland Colvin, in March, 1885, at £72,090,000, and the expenditure at £71,582,000. The war preparations threw the budget into confusion, and defeated the calculations for carrying on reforms and famine-relief works. The Government prepared two army corps at a cost of £2,600,000, ordered ordnance from England to the amount of £450,000, gave the Ameer an extra subsidy of £250,000, and appropriated £1,180,000 for expediting the construction of the Sinde-Pishin Railway. Another unexpectedly large opium-crop necessitated an expenditure of £600,000 above the estimates, which did not provide either for the £508,000 discount on the last £3,000,000 loan, nor for £75,000 expended on the Persian Gulf cable. The extraordinary military expenditures amounted to £4,480,000, but of this sum the budget was relieved of £700,000 by diverting the money borrowed for famine-relief railways to the construction of the Quettah strategic railway. With this deduction the military expenditures and other unanticipated charges not provided for in the budget amounted to £4,963,000. The Government economized on the budget estimates of expenditure to the extent of £454,000, while improved railway receipts allowed the revenue from this source to be estimated £500,000 higher, and the reduction of drawings on India effected a saving in exchange of £400,000, thus bringing the estimated deficit down to £3,101,000. By diverting £643,000 of provincial expenditures, which sum is supposed to be repaid at some time by the Imperial Government, by increasing the loan to be raised ostensibly for irrigation and famine-relief railways from the nominal amount of £2,225,000 to that of £3,500,000, producing an additional sum of £767,000, and by drawing on the balances, already reduced from the normal amount of £16,500,000 to £11,500,000, the difficulty was tided over. In Lord Randolph Churchill's budget statement about one half of the deficit was charged upon the receipts of the year, while £1,500,000 was carried over to 1886–'87. The famine-insurance fund of £1,500,000 a year, which it was determined in 1881 to provide out of the revenues, one half to be applied to relief-works and one half to reducing the debt, was swallowed up by the extraordinary charges. Famines, the fall in silver, the Russian advance, and the opium question are perplexing conditions, which leave Indian finances in chronic confusion. The Conservative Government planned to meet the difficulty created by the Russian advance by greatly strengthening the military defenses of India. Frontier railways were provided for by a loan bill for £5,000,000, but not the proposed fortifications on the northwest frontier, nor additional railroads in connection with them, which will require £3,000,000, exclusive of the armament of the fortresses. It was decided also to create a native army reserve, to increase the British force in India proportionately, and to provide gunboats and torpedoes for coast-defense. The proposed augmentation in the military defenses of the empire would entail an additional expenditure of £2,000,000 a year. This extra expenditure could not well be met by loans. The £3,000,000 loan at 3 per cent. raised in 1884 was issued at 94, but for the loan for the same amount issued in 1885 the best price that could be obtained was 85½. Fresh taxation, the abrogation of the provincial contracts, and the appropriation of the famine fund were doubtful expedients, yet the Government had no other resource. The new opium agreement with China, it was estimated, will result in a loss of £250,000 a year in the Indian revenue, while the Chinese Government will obtain an additional revenue of £1,000,000 a year.

The consolidated debt, on March 31, 1884, amounted to £161,300,221, and the floating debt to £10,277,724. Of the consolidated debt, £93,191,384 was payable in India, and $68,108,837 in England.

The Army.—The British force in India provided for in the army estimate for 1885–'86 consists of 9 regiments of cavalry, 77 batteries of artillery, 3 companies of engineers, and 50 battalions of infantry, numbering altogether 61,597 officers and men. There were with the colors, in the beginning of 1885, 58,753 men of all ranks, with 9,679 horses and 300 cannon. The imperial native army had 42 regiments of cavalry and 143 of infantry, and numbered 3,212 English officers and 117,670 native officers and men, a total force of 120,882 men, with 21,870 horses. The armies of the feudatory states aggregate 350,000 men, with an artillery of 4,237 guns. Their cannon are, however, worthless, antiquated pieces, and nine tenths of the troops are ill-armed and undisciplined. The recent British policy toward the native states has not been, as formerly, one of encroachment and absorption.

Lord Ripon's Administration.—When the Marquis of Ripon succeeded Lord Lytton in 1880, after setting Abdurrahman on the Afghan throne, and then withdrawing the English troops from Afghanistan, in accordance with the verdict of the English voters in the general election, he turned his attention to the question of finance and taxation. Partly relieved of the charges of the war by the British Parliament, the difficulties of the Indian Treasury were not so great as was supposed. With the aid of Sir Evelyn Baring he worked out a plan of fiscal reform which permitted between £2,000,000 and £3,000,000 of taxation to be lifted in 1882 from the overburdened Indian people. The abolition of import duties was not popular. It had the appearance of being dictated by English manufacturing interests. The reduction of the salt-tax, however, was an unequivocal and important benefit, and was so recognized by the grateful Hindoos. So oppressive was this cruel impost that people were reduced to lick salt from the earth like beasts or substitute unwholesome alkalies. Now the consumption has so increased that the tax has begun to recoup itself, and promises in a few years to stand at as high a figure as before. Commissions were set at work to elaborate a scheme of primary education and plans for extending the principle of local self-government and giving representative native bodies a voice in the expenditure of public moneys for local purposes. To confer on the Indian people a share in their own government, a return to the policy of Lord Lawrence and Lord Mayo was given out as the liberal programme for India. Although applied only in a few timid and tentative measures, it aroused the fiercest opposition of the Anglo-Indian official class, and excited hope, enthusiasm, and gratitude in the native population. The insignificant reform embodied in the Ilbert bill of 1884 was chosen by the opponents of Lord Ripon's policy as a gauge of battle. The effect of that would have given the half dozen native gentlemen who have risen to the grade of district magistrates jurisdiction over criminal offenses committed by white persons. Since the last Conservative Administration lowered the maximum age for the examinations held in England for the covenanted civil service from twenty-one to nineteen, there is no prospect of natives again attaining positions in the higher judiciary. The Ilbert bill clearly presented the question at issue, which was frankly taken up by the Anglo-Indians. In the words of Justice Stephen, the Anglo-Indian Government "is essentially an absolute government, founded not on consent, but on conquest," representing "a belligerent civilization." The Anglo-Indian press echoed this sentiment, and insisted that the security of the English *raj* depended upon crushing under the heel of the conqueror every aspiration for liberty. Because a pauperized and vicious class of whites has become numerous in India, while a multitude of natives have acquired a European education, this seemed a reason for emphasizing and widening the distinction between the "superior" and the "inferior" races. The very intelligence and accomplishments of the "Bengalee Baboo" were made the subject of coarse taunts. The native press hailed with fervid rhetoric the lifting of the despotic yoke indicated by the new policy. Public opinion became greatly excited. The English press reflected the views of the Anglo-Indian official world; and popular sentiment, engrossed with other questions, and alarmed by the vague terrors excited by the official experts, to whose opinion the English public has always deferred in Indian matters, gave the government no encouragement to persist in the liberal policy. The Ilbert bill was modified by giving to European prisoners a special right of appeal that rendered nugatory the jurisdiction conferred on native judges. Lord Ripon was no longer in place as Viceroy, and when the Afghan question loomed up was superseded by Lord Dufferin.

The Bengal Tenancy Act.—The new land law for Bengal was passed after four years of discussion in March, 1885, and went into operation Nov. 1. The bitter antagonism of the zemindars, or landlord class, to the measure was kept up after its enactment. After the accession of the Conservatives a strong effort was made to have it rescinded or its operation postponed. They succeeded during the preparation of the act in having it modified in their favor in important particulars, obtaining more than they ought to have in the opinion of Lord Ripon. The proprietor class was created by the permanent settlement of 1793, in which the Government reserved the right to legislate for the protection and welfare of the cultivators. The zemindars gained the upper hand in the long struggle with their tenants, and gained advantages not contemplated in the original settlement, and in some respects without legal authority. They enhanced the rents in excess of their lawful rights, and obtained the summary power of distraint for rent. In most cases the ryots submitted to extortion, but in some districts they refused to pay even their legal rent. The Bengal tenancy act aims to rectify the illegalities committed on both sides, and to establish tenant right. The bill, as modified in the interests of the zemindars in the Legislative Council, was entirely unsatisfactory to the ryots and their friends. One of the objects of the act is to secure an accurate system of accounts and receipts, and thus diminish litigation. After much discussion it was decided not to make tenant rights transferable by private sale. Local customs of transferability are preserved, and a general right of subletting is recognized. Thus, as a substitute for the principle of free sale, which is one of the prime conditions of tenant right, a system was established which will multiply unproductive middle-men. In Bengal a powerful class of middle-men already exists, which has been able to cope with the landlords, and in turn oppress the ryots to whom they sublet. The Government assessed the land-tax alike on cultivated and on waste lands, of which there was an enormous area. The zemindars leased the waste lands on reclamation contracts to ryots, who secured a permanent interest in the soil. The ryots in Bengal have been far more successful in resisting the extortions of landlords than those of Behar. The new act abolishes ejectment for non-payment of rent, and grants the landlord the power to sell the occupancy-right to recover his rent.

Political Agitation.—The promoters of the patriotic movement in Hindostan made an effort in the English general election to secure parliamentary representation of their interests. The Bombay Presidency Association, the Indian Association of Calcutta, and other native political clubs, united in addressing an appeal to the British electorate. One Hindoo candidate ran for Parliament in an English borough and polled a large vote, though not sufficient to elect him. The grievances brought to the charge of their foreign rulers by the natives constitute a severe indictment. Ignorance, neglect, selfishness, and oppression have in the minds of Indian patriots characterized the rule of the conquerors. The British Government has neglected to settle the land question in a permanent manner. It has not devised effectual means to check the inroads of famine. Taxation has been augmented until it presses upon the margin of subsistence. The people have been disarmed, and every manifestation of an independent and martial spirit has been repressed with ferocious severity. By the imposition of impossible conditions natives are completely excluded from all but the subordinate grades of the civil and military services. The representation of native interests in the Legislative Council is a mere mockery. In the distribution of the common charges between the Indian and the British Treasuries, burdens are shifted upon the overtaxed people of India without the color of equity. Legislation is framed in the interests of Englishmen, who by favor of the Government have acquired control of the main channels of Indian industry.

Social Reforms. — The English have lately sought to divert the attention of the natives from the burning political question of self-government to various social reforms. The evils resulting from some of their social customs are acknowledged and deplored by a great number of the educated Hindoos; yet few have the courage to take part in a public agitation for their reform. The custom of infant marriage is regarded as a cause of moral and physical degeneration. The Brahmanical caste rules are a bar to progress. The moral and intellectual life of the people is dwarfed by the suppression of the normal influence of woman, and the lot of the Hindoo women is in general extremely unhappy. Some educated native ladies and a few men of intellectual prominence have raised a public protest against the continuance of customs that assign the female half of the people to an unnatural seclusion and subjection, and especially against the doom of social death which closes over a Hindoo widow, even though she be still a child, who may never have seen her deceased husband. There is hope that the more barbarous features of these customs will be relegated to the past, like suttee. Enforced widowhood, as far as regards children who have never been given to their husbands, is not enjoined in the sacred writings, but the practice is strongly intrenched in the conservatism of the Hindoo nature. The widows without children, who number over 20,000,000 in the Indian Empire, are compelled to shave their heads, wear the coarsest garments, sleep on the floor, eat only once a day, and perform the meanest household drudgery. The childless widow possesses by law a life interest in her husband's property, which passes into the control either of the priests or of her relations, but would revert to the husband's family if she remarried. The remarriage of widows was made lawful by a decree of the Government in 1856. Enforced widowhood is the cause of a great deal of sexual immorality. A Hindoo lady likens the life of Hindoo wives to that of servants in Europe, asserting that they are often maltreated by their husbands, that they must work with the servants from early till late, and are forbidden to speak in the presence of any elder member of the family. The seclusion of women in the zenana is a custom that creates a greater necessity for female medical practitioners than exists in other countries. Men of all classes can have the benefit of medical skill, but the women in disease and in childbirth are subjected to the unscientific treatment that has been traditional for thousands of years, and in the worst surgical cases are left to suffer without relief. A national association has been established, with Lady Dufferin for its president, for the purpose of importing skilled female teachers from Europe and America for the purpose of instructing native women in medicine, midwifery, and nursing. A few Hindoo women have qualified themselves for practice in European medical schools, but many thousands are wanted.

Insurrection in Bhotan.—In the small and turbulent state of Bhotan, situated on the southern slope of the Himalayas, west of Sikkim, an insurrection culminated in the early summer in the overthrow of the prince. The Togu Penloo, or governor of the eastern half of the country, expelled the Deb Rajah, or temporal ruler. There was desultory fighting for some months. The Deb Rajah, who is an elective functionary, is a personage of much less consequence than the Dharma Rajah, or hereditary spiritual ruler. The Deb Rajah was shut up in Poonakha, the capital, whence he appealed without success to the Indian Government for assistance. When he was finally driven out by the rebels, some of his officers departed for Lassa, in order to solicit the aid of the Thibetans. In 1865 the British declared war upon the Bhotanese, who are a valorous race of savage hill-men, and captured certain coveted mountain-passes. The Chinese Empire claims a traditional suzerainty over this state, as over Nepaul and Cashmere.

The Afghan Boundary Settlement.—In an interview between Lord Dufferin and the Ameer of Afghanistan at the Rawul Pindi meeting, the latter seemed indifferent to the retention of Penjdeh. The Sariks were wealthy, but he could get no tribute from them, and could not tell which side they would take. The only localities to which he attached vital importance were the pass of Zulfikar, Gulran, and Maruchak. When the British Government proposed the exchange of Penjdeh for Zulfikar, the Russian Government agreed on April 16. After the general course of the line was agreed upon, a fresh controversy arose, regarding the portion in the vicinity of Zulfikar Pass, which was finally settled by a compromise, and defined in a protocol signed at London on Sept. 10. The frontier starts from the Heri Rud at Zulfikar, passes between the salt lakes south of Akrobat, leaving Souma Karez to the Afghans, to Islim, where it crosses to the right bank of the Egri-Gueuk, and follows the crest of the ridge of hills, leaving Islim and Chemen-i-Bid in Russian territory. It continues along the crest of the hills on the right bank of the Kushk as far as Hauzi Khan, and then follows a straight line to a point on the Murghab to the north of Maruchak, leaving to Russia all the lands cultivated by the Sariks and their pastures.

Col. Khulberg, the newly appointed Russian boundary commissioner, with M. Lessar as his assistant, proceeded to the Afghan frontier to trace the line in detail on the spot in conjunction with Col. Ridgeway, who had remained in Afghanistan, and was appointed the British commissioner. The dispute over Zulfikar Pass was kept up by the English Government in order to have something to show for the vote of eleven millions, yet did not obtain the concessions demanded of Russia. The Russians retained one opening of the pass, and preserved the communications on which they laid stress, and retained for the Turkomans all the salt lakes of any value, and their wells and pasture-lands. The Russian railroad to Askabad was completed by the 1st of November and the branch from Askabad to Merv begun.,

Insurrection in Nepaul.—On the night of Nov. 22, the sons of Dir Shumseer, who died as commander-in-chief of the Nepaulese army, attacked and murdered their uncle, the Prime Minister, Ranodip Singh, brother of the late Jung Bahadur and of Dir Shumseer. The Maharajah is a boy ten years of age. The army acquiesced in the revolution, and in the assumption of the post of prime minister by Dir Shumseer, the eldest of the brothers who headed the conspiracy. Ranodip Singh had alienated popular sympathy by his irregularities and his exactions.

The Restoration of Gwalior Citadel to Scindia.—In the beginning of December Lord Dufferin visited Gwalior, and executed a treaty, restoring to Scindia the ancient rock fort for which that ruler has pleaded for twenty years. Though the ruler remained loyal during the mutiny and gave powerful aid to the British, the native troops rebelled. The fort was captured by Lord Strathnairn in 1857, and the British flag has floated over it ever since. Scindia has introduced the German military system, and developed the most efficient army among the native states.

INDIANA. State Government.—The following were the State officers during the year: Governor, Isaac P. Gray, Democrat; Lieutenant-Governor, Mahlon D. Manson; Secretary of State, William R. Myers; Treasurer, John J. Cooper; Auditor, James H. Rice; Attorney-General, Francis T. Hord; Superintendent of Public Instruction, John W. Holcombe. Judiciary, Supreme Court: Justices, William E. Niblack, George V. Howk, Byron K. Elliott, Allen Zollars, and Joseph A. S. Mitchell.

Legislative Session.—The Legislature met on the 8th of January, and adjourned on the 12th of April, having been called together by the Governor in special session immediately after the close of the regular session in March, to complete the unfinished work. Daniel W. Voorhees, Democrat, was re-elected United States Senator, over ex-Governor Albert G. Porter, Republican. The Speaker of the House, in closing the session, spoke as follows:

> It is sufficient now to declare, what all who hear me know to be the truth, that this House convened in the face of grave responsibilities and an enormous amount of labor. No general or specific appropriation bill had been enacted for four years. The new State-House required intelligent legislation to the end that its early completion might be assured, and the State protected from loss or extravagance in connection with it. An extensive and expensive system of asylums for the insane was half finished, and without means for completion, and doubt was expressed as to the proper course of the State in regard to them. The redistribution of the congressional and legislative representation, always a difficult and delicate task, had to be made. Numerous minor investigations were to be made, and one State institution was subject to an appalling scandal, which compelled patient consideration and radical treatment. Many creditors of the State clamored for payment which had been so long neglected that the credit of this proud State was in danger of ranking as that of a common cheat. The questions of the proper aid to be given to the State institutions, and of the policy of the State in regard to one or two of them, were important and pressing. The regulation of railroad, telegraph, and telephone companies, the questions of drainage and gravel roads, of fees and salaries, the regulation of mines, the protection of citizens in equal rights, the relief of the laboring classes from the oppression sometimes practiced by employers, the question as to another Court of Appeals—these and numerous others pressed upon your notice and demanded consideration. In giving such consideration you have in one way or another considered six hundred bills, and I believe that the published volume of the acts of 1885 will in a large measure repel the disposition to criticise the action of this House which is most indulged by those who have the least information on the subject.

Among the acts passed were the following:

Appropriating $60,000 to pay the expenses of the extra session of the Legislature.

Outlawing the English sparrow.

Reorganizing the Soldiers' Orphans' Home and Asylum for Feeble-Minded Children, and providing that three trustees, one of them a woman and the others honorably discharged Union soldiers, shall be appointed by the Governor as a board of management.

Requiring the full monthly payment of employés engaged in manual or mechanical labor, and making the claims of such employés preferred claims.

Authorizing the appointment of short-hand reporters for courts of record in counties with 10,000 or more inhabitants, and fixing the compensation at not more than $5 for each day actually employed.

Prohibiting gambling on fair-grounds.

Prohibiting Sunday base-ball playing where any fee is charged.

Prohibiting forced contributions of money or property from employés by corporations or their officers.

Authorizing County Commissioners to make suitable provision from the County Treasury for the education of pauper children.

Levying a tax and authorizing a loan of $500,000 for the completion of the new State-House.

Legalizing certain sales of real estate by commissioners in proceedings by an executor or an administrator to sell such real estate.

Authorizing a temporary loan of $600,000 and making provision for funding the outstanding loan at a lower rate of interest.

Abolishing offices of City Treasurer and City Assessor in cities of over 70,000 people, and providing for the discharge of their duties by the County Treasurer and Township Assessor respectively.

Providing for the incorporation of fish-ladders, defining misdemeanors, and providing penalties.

Making the State Board of Health to consist of five members instead of four, and providing for the election of a secretary of the board.

Authorizing municipal corporations to purchase and hold real estate for sanitary purposes, and legalizing purchases heretofore made.

Amending section 5206 of the Revised Statutes of 1881 so that claims not exceeding $50 for work performed at any time within the previous six months, by laboring-men or mechanics, shall be treated as preferred debts against any corporation or person failing, assigning, or having his business suspended by creditors.

Prohibiting a tax levy of more than thirty-three cents on the hundred dollars in counties having a voting population of more than 25,000.

Prohibiting the buying and selling of votes, and prescribing penalties of disfranchisement and ineligibility to office.

Appropriating $30,000 to Indiana University.

Reapportioning the State for legislative purposes.

Proposing an amendment to section 2 of the Constitution so that no county officer except Surveyor shall be eligible to a re-election for the term of office immediately succeeding a term already served by him.

Authorizing County Commissioners in certain cases to construct free turnpikes instead of free bridges, and authorizing boards to pay for bridges built within the corporate limits of towns and cities.

To prevent the spread of Canada thistles.

Extending for thirty years mining corporations existing before the State Constitution took effect.

Legalizing certain sales of real estate made without appraisement by majority votes of Common Councils of incorporated cities.

Appropriating $600,000 for the completion of the three new asylums for the insane.

Concerning drainage: repealing certain laws, prohibiting the obstruction of drains, etc.

Increasing the bond of the State Treasurer to $700,000.

Appropriating $125,000 to defray the expenses of the regular session of the General Assembly.

Appropriating $3,000 to repair that portion of the Asylum for the Insane damaged by fire.

Prohibiting aliens from holding titles to real estate in Indiana.

Providing for the removal of obstructions from highways.

Appropriating from the general fund for the erection of tablets to the memory of Indiana soldiers who fell at Gettysburg.

Providing that in cities of fewer than 10,000 inhabitants the County Auditor and Treasurer shall levy and collect the city taxes and turn them over to the proper city officers.

Regulating the practice of medicine, surgery, and obstetrics, and providing for the issuing of licenses to practice by the County Clerk.

Appropriating $3,900 to maintain the Indiana exhibit at New Orleans.

Authorizing the levying of a township tax of 1 per cent. to support libraries.

Appropriating $40,000 to Purdue University for 1883 and 1884.

Appropriating $6,800 for the erection of a new building at the Reform School for Boys.

Regulating the business of building, loan fund, and savings associations.

Providing means for securing the health and safety of persons employed in coal-mines; prescribing penalties for violations and repealing all conflicting laws.

Empowering voluntary associations, incorporated under the laws of the State for establishing homes for aged women, to receive into such homes aged men also.

Providing that interest on county bonds may be paid annually or semi-annually.

Prohibiting the importation of foreign contract labor.

Amending the act providing for the organization and perpetuity of voluntary associations.

Prohibiting discriminations by telephone companies.

Authorizing school trustees to pay out of the special school fund money for real estate purchased for a public library.

Authorizing Boards of County Commissioners to accept gravel roads and maintain the same.

Amending the law providing for the taxation and registration of dogs.

Amending section 32 of the election contest law, so as to give the judges the right to examine ballots after the same have been read and announced by the inspectors.

Providing a contingent fund of $2,000 a month to be disbursed by the Superintendent of the Hospital for the Insane.

Authorizing owners of land separated by railroads to construct wagon and driveways over such railroads; also, releasing railroads from liability for stock-killing on account of such driveway.

Authorizing the County Treasurer, Auditor, and Recorder, jointly to accept offers of compromise touching delinquent lands in certain cases by consent of the Auditor of State.

Allowing County Commissioners of different counties to unite in the purchase of grounds and buildings for an Orphans' Home.

Providing that any person may appeal from a decision of County Commissioners in claims against counties to the Circuit or Superior Courts.

Authorizing universities and colleges to acquire, hold, and dispose of real estate.

Regulating weights and measures.

Giving to all people, without regard to race or previous condition, the advantages of restaurants, inns, eating-houses, barber-shops, and all places of public accommodation and amusement, and providing penalties for violation.

Authorizing commissioners of counties with uncompleted court-houses to issue bonds to raise funds for their completion.

Requiring foreign insurance companies operating in the State to have a paid-up capital of $250,000, of which $100,000 must be invested in stocks created under the laws of the United States, making the Auditor of State the attorney of the State on the State's dealing with such companies, empowering him at any time to examine their accounts, and defining the duties of agents of said companies.

Amending the act providing for the appraisement, purchase, and conversion of toll-roads into free roads.

IOWA. State Government.—The following were the State officers during the year: Governor, Buren R. Sherman, Republican; Lieutenant-Governor, Orlando H. Manning; Secretary of State, Frank D. Jackson; Auditor, John L. Brown, succeeded by Jonathan W. Cattell; Treasurer, Voltaire P. Twombly; Superintendent of Public Instruction, John W. Akers; Attorney-General, A. J. Baker; Adjutant-General, William T. Alexander; Commissioner of Labor Statistics, E. R. Hutchins; State Mine Inspector, Park C. Wilson; Fish Commissioner, A. W. Aldrich; State Veterinary Surgeon, Milliken Stalker; Railroad Commissioners, Peter A. Dey, James W. McDill, and Lorenzo S. Coffin. Judiciary, Supreme Court: Chief-Justice, Joseph M. Beck; Associate Judges, Austin Adams, William H. Seevers, Joseph R. Reed, and James H. Rothrock. On the 3d of March, Auditor Brown was suspended from office by the Governor on charges of non-compliance with the law, and Mr. Cattell was appointed to fill the office temporarily. On the 12th of May the Supreme Court pronounced the suspension legal, but a controversy existed through the year.

Prohibition.—Early in July, one year from the time when the prohibitory law went into effect, the State Temperance Alliance sent a circular to every township in the State, and at the end of a month they had received replies from 343 townships in 85 of the 99 counties, from which the following information was gained: Number of saloons prior to July 4, 1884, 927; number still open, 331; number of places having permits engaged in the liquor-traffic, 588; townships reporting majority in favor of enforcing the law, 273; against enforcement, 45; doubtful, 25. It is said that drunkenness, lawlessness, and consequently criminal expenses, have diminished in the same ratio as the saloons. It appears from the remarks accompanying the reports that there are comparatively few places where the law is openly violated; but all sorts of devices are resorted to in order to evade it, and sell liquor by stealth. Of those still engaged in the sale of liquor, openly or clandestinely, 356 were Democrats and 82 Republicans.

On Dec. 16 a convention of the mayors of cities in the State was held at Des Moines. Its proceedings were contrary to the tenor of the reports received by the Alliance. Mayor Davis, of Keokuk, in the course of remarks, said:

> A few years ago the people of the State of Iowa, at a popular election, declared by a large majority in favor of prohibition. Two years ago the Legislature of this State enacted a prohibitory law which in its many terms and conditions is as stringent as able pens in the hands of ready writers could draw it. That law has been in force since the 4th day of July, 1884—eighteen months—a sufficient time, it would seem, to at least bear some fruit as a token of what the practical results will be. And what are the honest, practical results of that law? The statistics prepared by Senator Sutton show 1,806 licensed saloons in the State of Iowa prior to July 4, 1884, and at the present time over 2,200 unlicensed saloons. The report of the United States Internal Revenue Commissioner for the year ending in June, 1885, shows there are in this State 3,549 retail liquor-dealers, 100 brewers, and 216 wholesale dealers in malt liquors, making an average of about 38 dealers for each of the 99 counties.

The convention adopted a memorial to the Legislature, wherein it set forth the following table as a proof of the uselessness of the law, and asked that the municipal corporations be reinvested with power to regulate the trade:

CITIES.	No. licensed saloons prior to July 4, 1884.	Amount of annual license.	No. places where intoxicants are now sold.
Des Moines	60	$60,000	200
Dubuque	145	14,500	200
Davenport	130	26,000	175
Burlington	68	27,500	100
Council Bluffs	65	25,000	64
Sioux City	47	4,700	73
Cedar Rapids	34	13,600	100
Keokuk	29	14,500	47
Clinton	38	12,482	80
Ottumwa	22	22,000	100
Muscatine	35	3,500	40
Marshalltown	28	7,000	32
Creston	7	11,200	11
Waterloo	20	......	..
Iowa City	40	5,000	40
Fort Madison	17	425	22
Fort Dodge	5	2,500	17
Lyons	11	300	14
Oskaloosa	10	4,000	8
Boone	11	5,500	1
Le Mars	18	5,400	61
Red Oak	9	7,200	22
What Cheer	17	17,000	23

To this end an amendment of the prohibitory law is asked, so that it shall not apply to the larger cities. The license-fee contemplated is not to be less than $500. On March 17 the Supreme Court rendered a decision in the case of Littleton *vs.* Fritz, sustaining the constitutionality of that feature of the prohibitory law which enables any citizen to proceed by injunction for the abatement of a saloon as a nuisance. In December the same court decided that it was necessary for druggists to obtain a special permit to sell liquor for purposes allowed by law. Many druggists held that the provisions of the old pharmacy law still applied, and that under it druggists regularly licensed as such did not require any other permit to be allowed to sell liquor for medicinal, mechanical, or sacramental purposes.

The Governor, in reference to this subject, says: "For several months the law was generally complied with throughout the State, and continued to be quite well observed until judicial and other officers connived at, and even openly encouraged, the violation of the law. In several instances appeals were taken and the cases transferred from the State to the Federal courts, and these cases are still undecided. Under these embarrassments those especially interesting themselves in enforcing the law have relaxed their efforts, waiting for the decision of the courts. The opponents of the law, of course, take advantage of this opportunity, and endeavor to force a conclusion upon the public mind that the law is a failure. The law has not yet proved a failure, nor has it proved an entire success."

Political.—The Greenback State Convention met in Des Moines on July 7. It put forth a platform and adopted the following:

> *Resolved*, That it is the sense of this convention that the convention nominate only a candidate for Lieutenant-Governor and Superintendent of Public Instruction; that if the Democratic Convention indorse our nominees and further nominate a candidate for Governor and Supreme Judge who are publicly known to be unflinching anti-monopolists, then in that case our State Central Committee are instructed to place said names upon our ticket, and we pledge them our hearty support, otherwise the Central Committee is instructed to fill our ticket with straight Greenbackers.

E. H. Gillette was nominated for Lieutenant-Governor, and F. W. Moore for Superintendent of Public Instruction.

The Democratic State Convention was held at Cedar Rapids on Aug. 19. Charles E. Whiting was nominated for Governor, and W. F. Brannan for Justice of the Supreme Court. The Greenback candidates were approved. The platform contained the following:

> We declare in favor of the repeal of the prohibitory liquor law of the State of Iowa as unjust and hostile to temperance.
>
> We pledge ourselves to favor and use our best efforts for the enactment of a license law of $250, with power to increase the same from $250 to $1,000 as may be deemed best for the public interest in the various localities of the State, as expressed by the legally constituted authorities of such locations.
>
> We pledge ourselves to favor and use our best efforts for the enactment of a law which shall punish as criminal the manufacture and sale of all adulterated liquors, such adulteration being the direct cause of intemperance, and destructive to the health of the people.

The Republican State Convention convened at Des Moines on Aug. 26. The following ticket was nominated: For Governor, William Larrabee; Lieutenant-Governor, J. A. T. Hall; Supreme Judge, J. M. Beck; Superintendent of Public Instruction, John W. Akers. The platform protests against the suppression of the colored vote in the South, favors a protective tariff, and advocates civil-service reform and the regulation of railroads by law. It contains the following:

> We demand that ample provision shall be made by law for the protection of labor and capital and their varied interests, and such laws should provide for a State Board of Arbitration, for the adjustment and settlement of disputes between labor and capital, including the questions of screening coal and others peculiar to the mining interests of the State, in order that the miners may be assured pay for all work done by them, and labor should have its just proportion of representation on such board. And we further declare that provision should be made by law whereby convict-labor shall not be brought into competition with the other labor within the State.
>
> The Republican party of Iowa, while a steady upholder of the right and duty of the State to regulate the traffic in liquor by such methods as will suppress the most of its evils, has never made the support of prohibition a test of party fealty. It pledged its honor to enact, and afterward did enact, a law which the people of Iowa, at a non-partisan election fairly held, had ordered by an unquestioned majority that came alike from the votes of Republicans and Democrats. We declare now for a fair and thorough trial of that law, that it may have time to demonstrate its efficiency, or prove its inefficiency, before it is repealed to give way to some other honest and earnest method in the line of finding the true and successful system of dealing with the liquor traffic. We arraign and condemn the Democratic party of Iowa for its action in declaring for a $250-license, compulsory on every community regardless of local opinion, for legalizing again in Iowa the sale of whisky and all other alcoholic liquors, and for removing all restrictions from the saloons, giving a freedom in the liquor traffic that has not existed in Iowa for thirty years.

The Straight Greenbackers and Prohibitionists also nominated candidates for the State offices. At the election on Nov. 3 the Republican ticket was successful. The following was the vote for Governor: William Larrabee, Republican, 175,504; Charles E. Whiting, Fusionist, 168,525; Elias Doty, Greenbacker, 302; James Mickelwait, Prohibitionist, 1,405; scattering, 46.

The Legislature of 1886 consists of 31 Republicans and 19 Fusionists in the Senate, and 60 Republicans, 39 Fusionists, and 1 Independent in the House.

Coal-mining.—The total product of coal in 1881 was 3,500,000 tons; 1882, 3,127,700; 1883, 3,881,300; 1884, 3,903,438; 1885, 3,585,737. There is great difficulty in getting the small mines to report. For 1885 returns were made from only 417 out of the 489 mines operated in the State. The falling off in the output between 1884 and 1885, which was 317,701 tons, is attributed to several causes, one of which was the protracted strikes at What Cheer and at Angus.

Railroads.—The commissioners estimate the capital stock of the roads in the State, computing the proportion for lines only partly within the State limits, to be: broad-gauge, $133,484,621, or $18,604.46 a mile; the narrow-gauge roads, $1,267,575, or $7,826.58 a mile.

The total number of miles of railroad reported as in operation June 10, 1885, was 7,478.43.

The total amount of railroad stock that is owned by persons who are living in the State is $7,956,650.

The total debt of the roads in Iowa is: Broad-gauge, $137,282,526.72, or $19,133.80 per mile; of this amount $133,203,562.02 is funded debt, $4,078,964.70 is unfunded or floating debt. Narrow-gauge roads, $1,119,200.80 funded debt, $86,373.42 floating debt.

The entire earnings of the roads in Iowa are reported as follows:

Passengers, mail and express	$9,891,100 13
Freight and miscellaneous	26,142,837 82
Total earnings for the year ending June 30, 1885	$36,123,587 45
Total earnings for the year ending June 30, 1884	35,735,271 85
Increase over previous year, or for Iowa an increase of 1·07 per cent	$388,315 60

The total amount of taxes paid by the railroads in Iowa is $768,274.43, which is $112,874.93 less than last year. Some of the roads have availed themselves of the provisions of the present law and paid but one half their taxes before they reported.

Population. — The State census taken this year shows a considerable increase in the population. The following table gives the number of inhabitants by counties in 1880 and 1885:

COUNTIES.	1880.	1885.	COUNTIES.	1880.	1885.	COUNTIES.	1880.	1885.
Adair	11,667	14,102	Franklin	11,249	11,324	Montgomery	15,895	15,901
Adams	11,888	12,146	Fremont	17,652	15,921	Muscatine	23,170	24,320
Allamakee	19,791	18,335	Greene	12,727	15,923	O'Brien	4,155	8,389
Appanoose	16,636	16,941	Grundy	12,639	12,804	Osceola	2,219	8,995
Audubon	7,448	10,825	Guthrie	14,394	16,489	Page	19,667	20,988
Benton	24,888	23,902	Hamilton	11,252	14,075	Palo Alto	4,131	6,887
Black Hawk	23,913	23,860	Hancock	3,453	5,089	Plymouth	8,566	15,481
Boone	20,838	24,972	Hardin	17,807	18,526	Pocahontas	8,713	6,152
Bremer	14,081	14,350	Harrison	16,649	20,560	Polk	42,395	51,907
Buchanan	18,546	17,726	Henry	20,986	17,862	Pottawattamie	89,850	45,866
Buena Vista	7,537	11,530	Howard	10,837	9,805	Poweshiek	18,936	18,203
Butler	14,293	14,523	Humboldt	5,341	8,065	Ringgold	12,085	12,730
Calhoun	5,595	9,836	Ida	4,382	9,012	Sac	8,774	12,741
Carroll	12,351	16,329	Iowa	19,221	18,190	Scott	41,266	41,956
Cass	16,943	18,019	Jackson	23,771	22,839	Shelby	12,696	16,306
Cedar	18,936	17,832	Jasper	25,963	25,247	Sioux	5,426	11,584
Cerro Gordo	11,461	12,638	Jefferson	17,469	15,995	Story	16,906	17,527
Cherokee	8.240	12,584	Johnson	25,429	23,046	Tama	21,585	21,622
Chickasaw	14,534	13,899	Jones	21,052	19,654	Taylor	15,635	15,973
Clarke	11,513	11,369	Keokuk	21,258	23,318	Union	14,980	16,502
Clay	4,248	6,438	Kossuth	6,178	9,337	Van Buren	17,043	16,170
Clayton	28,829	26,843	Lee	84,859	34,024	Wapello	25,285	25,803
Clinton	86,763	38,661	Linn	87,237	40,720	Warren	19,578	17,868
Crawford	12,413	16,131	Louisa	13,142	11,926	Washington	20,374	18,504
Dallas	18,746	20,050	Lucas	14,530	14,791	Wayne	16,127	15,494
Davis	16,463	15,183	Lyon	1,968	4,007	Webster	15,951	19,987
Decatur	15,336	15,083	Madison	17,224	16,240	Winnebago	4,917	5,579
Delaware	17,950	17,436	Mahaska	25,202	27,131	Winneshiek	23,938	22,680
Des Moines	33,099	35,733	Marion	25.111	23,419	Woodbury	14,996	32,289
Dickinson	1,901	3,213	Marshall	23,752	25,036	Worth	7,953	8,257
Dubuque	42,996	45,496	Mills	14,137	13,727	Wright	5,062	9,380
Emmet	1,550	2,781	Mitchell	14,363	12,825			
Fayette	22,258	22,422	Monona	9,055	12,178	Total	1,624,615	1,758,980
Floyd	14,677	15,362	Monroe	13,719	12,324			

The following table gives the population of the principal cities of the State, from the census of 1885, together with their population in 1870 and 1880:

CITIES.	1870.	1880.	1885.
Des Moines	12,035	22,408	32,469
Dubuque	18,438	22,254	26,330
Davenport	20,038	21,831	23,830
Burlington	14,930	18,450	23,459
Sioux City	3,401	7,366	19,060
Cedar Rapids	5,940	10,104	15,426
Council Bluffs	10,020	15,063	21,557
Keokuk	12,769	12,117	13,151
Clinton	6,119	9,052	12,012
Ottumwa	5,214	9,009	10,506
Muscatine	6,918	8,295	10,889
Marshalltown	3,518	6,240	8,298
Iowa City	5,975	7,123	6,748
Waterloo	4,337	5,630	6,479
Oskaloosa	3,204	4,590	6,012
Fort Madison	4,011	4,679	4,925
Lyons	4,088	4095	4,893

Creston has 7,393 inhabitants; Fort Dodge, 4,552; and Boone, 4,331.

Farm Statistics. — The following figures are taken from the census of 1885, which for farm items is not complete, some townships failing to report:

Average size of farm, acres	142
Acres of improved land	20,189,894
Acres of unimproved land	8,058,853
Acres in cultivation	12,874,865
Acres in pasture	5,265,858
Farms managed by owner	137,836
Farms managed by manager	2,009
Farms managed by tenant for money-rent	12,278
Farms managed by tenant for crop-rent	30,102
Irish potatoes, bushels	11,272,154
Sweet potatoes, bushels	214,971
Tobacco, pounds	440,690
Indian corn, bushels	218,058,181
Spring wheat, bushels	15,832,725
Winter wheat, bushels	736,459
Oats, bushels	86,560,439
Rye, bushels	1,884,252
Barley, bushels	5,722,553
Buckwheat, bushels	309,016
Broom-corn, tons	2,740
Sorghum-sirup, gallons	1,971,818
Sorghum-sugar, pounds	73,583
Timber, acres planted	120,737
Apple-trees in bearing	4,833,696
Apples, bushels gathered	4,113,591
Honey, pounds	1,997,931
Cattle, thoroughbred	9,679
Cattle, grades	376,651
Cattle, work-oxen	6,769
Cattle, milch-cows	992,313
Cattle, all others	2,104,191
Cattle slaughtered and sold for slaughter	610,088
Horses, total Jan. 1	848,767
Horses sold for export	33,850
Hogs, total Jan. 1	1,328,190
Hogs slaughtered or sold for slaughter	3,186,431
Sheep, total Jan. 1	441,047
Sheep slaughtered or sold for slaughter	116,765
Wool, pounds	2,289,430

Educational Statistics. — The following items are derived from the census of 1885: Number of State institutions of learning, 9; colleges and universities, 23; academies and seminaries, 16; normal schools, county high schools, and private schools, 13; commercial colleges, 11; value of school-houses, $108,080.89; number of pupils enrolled, public schools, 472,966; whole number of students, 623,151; number of male instructors, 5,760; number of female instructors, 17,359; average monthly compensation of male instructors, $37.48; of female instructors, $30.42.

Church Statistics.—The following table is also made up from the census of 1885:

DENOMINATIONS.	Value of church property.	Seating capacity.
Adventist	$48,350	6,398
Baptist	929,035	81,835
Christian	334,850	45,515
Congregational	806,600	56,495
Episcopal	427,860	14,529
Methodist	2,575,349	233,718
Presbyterian	1,337,290	98,652
Roman Catholic	2,867,168	104,516
United Brethren	135,750	17,092
Friends	97,200	17,055
Unitarian	69,000	1,450
Universalist	132,800	6,250
Evangelical	261,900	24,754
Union	56,750	10,491
Lutheran	787,524	61,433
Other	740,000	18,138
Total	$11,911,966	812,838

The whole number of organizations is 3,762; owning property, 3,406; renting, 386; not reporting value, 388; not reporting capacity, 760.

State Institutions.—The State University, at Iowa City, in 1884–'85 had 236 collegiate, 57 law, 149 medical (33 homœopathic), and 36 dental students. The State Agricultural College, at Ames, had in 1885 306 students; volumes in library, 5,986. The State Normal School, at Cedar Falls, in 1884–'85 had 408 students, besides 68 in the model school. The average attendance was 255.

The Soldiers' Orphans' Home and Home for Indigent Children, at Davenport, has cared for over 1,800 children since its establishment. On June 30 it contained 280 (151 boys and 129 girls), of whom 47 were soldiers' orphans from the State at large, and 233 indigent children from 41 counties. The College for the Blind, at Vinton, on the 10th of June had 151 pupils (71 boys and 80 girls). The Institute for the Deaf and Dumb at Council Bluffs had 305 pupils in attendance during the last biennial period. The Institution for Feeble-minded Children, at Glenwood, had an enrollment of 259 (164 males and 95 females) on the 30th of June. Of these 54 were classed as non-improvable. Not fewer than 75 are claiming admission, but facilities are lacking. The Hospital for the Insane, at Mount Pleasant, since its establishment in 1855, has had 5,838 patients, of whom 1,734 have been discharged recovered, 1,002 improved, and 1,421 stationary; died, 1,126; not insane, 11. The Hospital for the Insane, at Independence, from May 1, 1873, to June 30, 1885, received 3,113 (606 being readmissions); discharged and died, 2,419; remaining, 694. A new Hospital for the Insane is to be located at Clarinda, Page County. The Iowa Industrial School has a boys' department at Eldora and a girls' department at Mitchellville. Boys committed from Sept. 21, 1868, to June 30, 1885, 1,095; remaining at the latter date, 290; girls, 148 and 100 respectively. The Penitentiary, at Fort Madison, contains about 800 convicts, and that at Anamosa 525.

Manufactures, etc.—The census of 1885 returns 2,865 manufacturing establishments; value of goods made in 1884, $70,355,598; capital, $22,524,174. The assessed value of property in the State in 1885 was $489,660,081.

ITALY, a kingdom in southern Europe. The Sardinian Constitution of 1848, extended to the whole country upon the unification of Italy under Victor Emanuel in 1861, vests the executive authority in the sovereign, to be exercised through responsible ministers, and the legislative authority in the Parliament. The Senate is composed of members nominated for life by the King. The members of the Chamber of Deputies, 508 in number, are elected on a collective ticket by ballot by citizens paying 20 lire in taxes. The proportion of the population inscribed as electors in 1882 was 6·97 per cent., and of the registered voters 61 per cent. voted. The duration of Parliament is five years, unless dissolved before the end of the period.

The King is Humbert I, born in 1844, who ascended the throne upon the death of Victor Emanuel, his father, in 1878. The ministry is composed of the following members: President of the Council and Minister of the Interior, A. Depretis, appointed May 29, 1881; Minister of Foreign Affairs, Count C. F. Nicolis di Robilant, appointed in October, 1885; Minister of Public Instruction, M. Coppino; Minister of Finance and of the Treasury, A. Magliano; Minister of War, Gen. C. Ricotti; Minister of Marine, B. Brin; Minister of Grace, Justice, and Worship, D. Tajani; Minister of Public Works, J. Genala; Minister of Agriculture, Industry, and Commerce, B. Grimaldi.

Area and Population.—The area of Italy, according to the official calculation, is 296,323 square kilometres; according to a calculation made in the Military Geographical Institute of Florence, in 1884, it is 286,588 square kilometres (about 110,226 square miles), the peninsula and adjacent isles containing 236,771 square kilometres; Sicily and adjacent isles, 25,740; and Sardinia and adjacent isles, 24,077. The population in 1881 was 28,459,628, divided into 14,265,383 males and 14,194,245 females. The population, as officially computed in the beginning of 1885, was 29,361,032. The foreign population in 1881 numbered 59,956, of whom 1,286 were citizens of the United States. The number of marriages in 1884 was 239,514; of births, 1,169,006; of deaths, 818,626; excess of births, 350,380.

The emigration in 1884 was 147,017, against 169,101 in 1883, 161,562 in 1882, 135,832 in 1881, and 119,901 in 1880. Of the emigrants who left Italy in 1884, 87,558 went to the various countries of Europe, 3,123 to northern Africa, 55,467 to North and South America, and 869 to other countries. The emigration to the United States and to European countries showed a large diminution in obedience to a lessened demand for labor, but the emigration to the states of La Plata, which increased from 13,345, in 1880, to 26,075 in 1883, rose to 34,016 in 1884. The number of emigrants whose destination was the United States or Canada was 5,756 in 1880, 11,868 in 1881, 18,669 in 1882, 21,337 in 1883, and 10,847 in 1884. The number of Italians living in foreign countries in 1881 was 1,032,392, of whom 380,352 were in Europe and 579,385 in America. The number in the United States was about 170,000; in the Argentine Republic, 254,388; in Brazil, 82,196; in Uruguay, 40,003; in Peru, Mexico, and other countries, 32,748.

The cities with a population exceeding 100,000 in 1881 were as follow:

CITIES.	Town.	Commune.
Naples	463,172	494,314
Milan	295,543	321,839
Rome	273,268	300,467
Turin	230,183	252,832
Palermo	205,712	244,991
Genoa	138,081	179,515
Florence	134,992	169,001
Venice	129,445	132,826
Bologna	103,998	123,274
Catania	96,017	100,417

Commerce.—The special imports and exports of Italy were for five years in lire as follow, inclusive of precious metals:

YEARS.	Imports.	Exports.
1880	1,225,600,000	1,132,300,000
1881	1,332.000,000	1,192,300.000
1882	1,345,400,000	1,155,900,000
1883	1,380,300,000	1,199,900,000
1884	1,343,800,000	1,096,400,000

The imports of articles of food and consumption in 1884 amounted to 320,300,000 lire, the exports to 320,600,000 francs. The imports of wheat were more than in any year since 1879, amounting to 355,146 tons, or, deducting exports, to 317,193 tons. In 1883, when the total imports amounted to 254,290 tons, Russia furnished more than half and Turkey nearly a third, India coming next. The exports of wines and liquors in 1884 were valued at 84,000,000 lire, those of animals and animal products, at 109,900,000 lire. The imports of raw materials in 1884 were 425,600,000 lire in value, against 432,700,000 lire in 1883; the exports, 447,300,000 lire, against 470,900,000. The imports of manufactured articles amounted to 390,200,000 lire, against 372,400,000; the exports to 146,500,000 lire, against 177,900,000; the imports of other articles were valued at 177,900,000, exports at 151,000,000 lire. In the exports of manufactured articles the falling off was in the class of jewelry and art-works. The imports of precious metals amounted to 29,800,000, the exports to 31,000,000 lire.

The participation of the leading commercial nations in the export and import trade in 1884 is shown in the following table, giving the trade with each one, in lire:

COUNTRIES.	Imports.	Exports.
France	289,300,000	425,200,000
England	300,200,000	89,700,000
Austria	206,100,000	111,300,000
Germany	110,700,000	109,300,000
Switzerland	75,200,000	129,100,000
United States and Canada	60,200.000	55,100,000
Russia	50,800,000	22,800,000
South America	25,500,000	31,200,000
Turkey, Servia, and Roumania	34,500,000	16,000,000
Other countries	191,300,000	106,700,000
Total	1,343,800,000	1,096,400,000

Navigation.—The movement of shipping in Italian ports in 1884 was as follows: Total tonnage entered, 16,717,679; total with cargoes, 13,130,904; steam tonnage, 13,488,190; employed in foreign trade, 5,216,252 tons—1,415,251 under the Italian and 3,801,001 under foreign flags; in the coasting trade, 11,501,427 tons—8,306,454 Italian and 3,194,973 foreign; total tonnage cleared, 16,666,031—5,228,960 tons in the foreign and 11,437,071 in the Mediterranean trade.

The mercantile navy in 1884 numbered 7,072 sail-vessels, of 848,704 tons, and 215 steamers, of 122,297 tons, 14 steamers having been added during the year and 198 sailing-vessels taken off the register. The number of inscribed sailors in 1884 was 189,162.

Railroads.—In the beginning of 1884 the length of railroads in operation was 9,455 kilometres. The receipts in 1883 were 206,135,995 lire; the total capital expended up to Jan. 1, 1884, was 2,852,311,407 lire.

Finances.—The treasury accounts for 1883 show a total revenue of 1,563,248,798 lire and an expenditure of 1,563,355,269 lire, leaving a deficit of 106,471 lire. The budget estimates for the year ending June 30, 1886, make the total ordinary receipts 1,456,173,074 lire, and the expenditures 1,388,753,117 lire, and the extraordinary receipts 240,234,848, and expenditures 318,559,652 lire; giving a total revenue of 1,696,407,922 lire, and a total expenditure of 1,707,312,769 lire, thus leaving a deficit of 10,904,847 lire.

The interest on the public debt of all descriptions in 1884–'85 amounted to 530,328,687 lire, the sinking-fund charges to 1,517,221 lire.

The Army.—The effective of the permanent army, or army of the first line, on the 1st of January, 1885, was 881,203 men of all ranks; of the mobile militia, or army of the second line, 362,353 men; of the territorial militia, 1,156,522; total war strength, 2,400,078 men. The infantry in the permanent army numbered 250,058 men, exclusive of the 371,959 district troops; the Alpine regiments numbered 22,430, the bersaglieri 41,410, the cavalry 26,769, the artillery 84,389, the engineers 19,803, the carabiniers 21,894 men. The army is divided into 12 corps, each containing 2 territorial divisions with 10 brigades in each division. The permanent army comprises 96 regiments of line infantry, 12 of bersaglieri, 6 of Alpine troops, 22 of cavalry, 12 of field-artillery, 5 of fortress artillery, 2 brigades of horse and 2 of mountain artillery, 4 regiments of engineers, 1 of pontoniers, and several brigades for special service. The infantry arm in the active army is the Vetterli rifle, firing 35-gramme cartridges and 12 shots a minute. Every Italian is liable for military duty betwcen the ages of twenty and forty. At the drawing of lots the young men fit for service are divided into three categories. The first is the recruit of the active army, which is annually fixed by Parliament. After the period of active service the men pass into the mobile militia for four years, and then spend seven years in the territorial militia, except the cavalry, coast companies, and train, who go over to the territorial militia at once. The men of the second category receive from two to six months' instruction, a part of them only fifteen days' instruction, and are employed as complement troops to fill vacancies upon mobilization. They pass with their classes into the mobile and the territorial militia. The third category consists of men who are exempt from service in peace-time, and who, after training for fifteen days, are assigned at once to the territorial militia. The amount of instruction and the average time spent with the colors depends upon the sum at the disposal of the ministers of war. The mean duration of service with the colors in the Italian infantry is something over twenty months, as compared with thirty-two months in the French, and twenty-seven in the German and Austrian armies. The infantry, artillery, and engineer cadres are kept about half full, the rest of the men being dismissed on unlimited furloughs after eight months' drill. The cavalry cadres are maintained at nearly their war strength. The mobile militia is composed of men who have passed through the active army and of the second portion of the complement troop. The strength of the active army on the peace footing is about 217,000 men, which can be raised to 704,000 by calling in the men on furlough. The second line of reserves numbers 330,000 men. The territorial militia would raise the total to about 2,000,000, but it is inferior even to the French territorial army in organization, training, equipment, and *morale*, while the Italian active army is rated as high for apparent efficiency as any army in Europe, especially the infantry; the cavalry arm is excelled in Germany and other countries, while the artillery is considerably below the French in skill. A model body of troops are the Alpine regiments, which are intended to perform the same service as the cavalry on the eastern frontier of France, that of covering the mobilization of the army. There are 36 companies, kept permanently at the war strength of 250 men, organized in 10 battalions of 3 or 4 companies each. The companies are recruited principally in the district in which they are posted. There are 21 on the French, 4 on the Swiss, and 11 on the Austrian frontier. Connected with each company is a reserve company and a mobile militia company, each of greater strength than the active company, all under the command of a colonel. The total number is a little over 36,000 officers and men. They are constantly exploring and practising manœuvres along the mountain boundary. Attached to the force are mountain batteries and engineer companies, and numerous hill forts have been constructed.

The Navy.—The navy in 1885 was composed of 3 ironclad turret-ships and 14 other ironclads of the first class; 1 ironclad, 2 armored floating batteries, 6 corvettes, 1 yacht, and 4 torpedo-rams, of the second class; and 1 torpedo-ram, 7 avisos, 6 gunboats, and 1 torpedo-vessel, of the third class; in all, 46 battle-ships, carrying 155 guns. There were besides 49 torpedo-boats, 2 more of larger dimensions, school-ships, gunboats, and other steam-vessels, in all 84. The *personnel* numbered 15,055 men, exclusive of officers. The first-class war-ships carry 100-ton guns. The largest is the "Lepanto," of 18,000 horse-power and 13,700 tons displacement, with 4 great guns and plates 19 inches thick. The "Duilio" and the "Dandolo" have 22-inch armor. The "Ruggiero di Lauria," launched in August, 1884, has 18-inch plates and is of 10,000 horse-power and 10,000 tons. The "Andrea Doria" and "Francesco Morosini" are like it, and the "Italia" is a sister ship to the monster "Lepanto." A cruiser, the "Giovanni Bausan," modeled after the Chilian "Esmeralda," but more powerful, was launched in England in 1885. She carried two 25-ton breechloaders and an armament of rapid-firing 6-pounders, torpedoes, and machine-guns in turrets.

In the torpedo service, which the Italian Government aims to make very complete and efficient, the Schwarzkopf is being substituted for the Whitehead torpedo, as is being done likewise in the Spanish, the Chinese, and the Japanese navies. The hulls of the great ironclads have all been laid in Italy, and the work is done, as far as possible, by Italian labor—a condition stipulated in the contracts given out abroad, as to Schneider for armor, and to Armstrong for guns. The 100-ton guns give the highest initial velocity yet obtained, throwing a projectile of 950 kilogrammes with a charge of 350 kilogrammes.

The Red Sea Expedition.—Forestalled in Tunis by France, Italy had the opportunity of forming an alliance with England and of establishing a footing on the African coast by co-operating with that power at the time of the Egyptian crisis of 1882 in restoring order in the Nile valley. The Government then recoiled from so bold a course, and elected to conform its policy to the dictates of the powerful Central European League. The intended abandonment of the Soudan by England afforded a chance to Italy of acquiring a foothold on the Red Sea coast. In 1880, when Italy first contemplated seriously the establishment of a station at Assab Bay, Egypt protested as the heir to the authority of the Sultan in these regions, and her protest was supported by England. In January, 1885, an expedition was sent from Naples to occupy Massowah and other points on the coast near the Abyssinian frontier. After the fall of Khartoum, Italy offered to coöperate with Great Britain in the proposed campaign against the Mahdi, but the offer was declined. It was supposed, however, that a secret understanding with Great Britain left the Italians free to garrison the forts and establish their rule in the place of that of the Mahdi in this portion of the Soudan. When a second expedition was preparing, and while the intentions of Italy were still kept secret, the Porte asked the Italian Government for explanations regarding the dispatch of vessels of war to the Red Sea. The Italian Government in its reply acknowledged the sovereign and territorial rights of the Sultan, and said that the retreat of the garrisons necessitated action for insuring the safety of Italian subjects, promising that Italy, following the example of the British at Berbera and Zeilah, would allow the Egyptian flag to remain by the side of her own at every point occupied.

On Nov. 3, 1884, the Italian ambassador in London inquired whether the British Government would oppose an extension of Italian jurisdiction to the north of Assab so as to include Beilul in the same way as Raheita had already been taken in on the south. Earl Granville replied that his Government would feel no jealousy of the extension of Italian influence, but would welcome it. On Dec. 22 Count Nigra asked if a provisional occupation of Zulla would meet with objection, and was informed that the ports of the Red Sea littoral would revert, upon their abandonment by Egypt, to the Sultan, and that it was a matter for the Italian Government to arrange with the Sublime Porte. England had advised Turkey to reoccupy the ports, and when subsequently the Turkish Government complained of the Italian action, the English Cabinet disclaimed any responsibility, since its advice to the Sultan had not been acted upon. The protests of the Porte were accompanied by military preparations, but, reassured by Italian declarations, the occupation of the ports was acquiesced in by the Turkish Government. At the end of January the French Government questioned the English Cabinet in regard to the rumored understanding with Italy relative to the occupation of Massowah. Earl Granville denied the right of the French authorities to make such an inquiry after the French operations on the coast of the Soudan. A correspondence had been carried on between the Turkish, English, and other governments since the beginning of 1884 in relation to the ports from which the Egyptian garrisons were to be withdrawn. These places were threatened with attacks from the Somalis and King of Shoa. Upon Lord Edward Fitzmaurice making a statement in March that the French claimed Obock, M. Waddington wrote that Obock was not claimed by France, since it had long been a French possession. Later in the year the French flag was hoisted at Ras Ali, Angar, and Sagallo; Tajourra, from which the Egyptians were driven by the Dankalis, was also annexed by France, and on Jan. 11, 1885, the French consul at Aden announced that the coast between Ras Ali and Ghubbat Kharab was under French protection. The Porte claimed sovereignty over the whole coast. The Turkish claim was recognized by the English Government, except as regards a district in which it had previously been disallowed. The recognition of Turkish sovereignty over the coast formerly occupied by Egypt was made conditional upon the suppression of the slave-trade and the observance of the provisions regarding British trade in the Anglo-Egyptian convention of 1877. The coast between Ras Hafnu and Zeila was taken possession of by Great Britain in the name of the Indian Government.

On Feb. 6 five war-vessels landed 2,500 men at Massowah. The later expeditions increased the Italian garrison to 5,000 men. Small fortified camps were established not only in Massowah and Towlud and in the coast district of Jerrar northward, but also in the villages of Hotumloh, Monculloh, Kikiko, and in the advanced post of Sahdi in the interior. The land troops consisted of engineers, bersaglieri, line infantry, and fortress artillery, with an insignificant cavalry force. There were plenty of mules and camels for transport. The Italian force landed and occupied the town and forts without opposition. The Egyptian garrison remained in its former quarters. Until the Italian force was augmented and neighboring points taken possession of, the region was kept in a disturbed state by the Mahdi's adherents. Arafali, at the upper end of Ansley Bay, was occupied in the beginning of April.

Massowah is a town of 7,000 inhabitants, built on two islets in the bay of Zulla, otherwise called Ansley Bay. The population includes 600 Franks, Arabs, Soudan negroes, and a few Abyssinians and Hindoos. The shore is a sterile, waterless strand. Drinking-water for the townspeople must be brought from a distance. The route from Massowah to Kassala and Sennaar can be made an outlet for the products of the Soudan unless the extreme heat of summer hinders the establishment of a European trading colony. The possession of Massowah may lead to the establishment of Italian dominion in Abyssinia, which is an excellent field for colonization, possessing a vast extent of fertile soil in the salubrious uplands capable of producing all the fruits of southern Europe, and yielding coffee equal to the Mocha.

After the occupation of Massowah, the Italian troops took possession of Beilul. The second expeditionary force arrived at its destination, Assab, in the beginning of March. Presents and conciliatory messages from King Humbert and Signor Mancini were conveyed to the Abyssinian Negus by Capt. Ferrari. A third force left Naples on the 23d of February. The civil authority in Massowah continued to be exercised by Egyptian officials until about the 1st of December, when the Egyptian governor was sent away, and the administration taken over by the Italian commander, Gen. Gene.

In December, Count Robilant, when questioned in regard to foreign policy, said that the Government had no intention of departing from the direction taken by Signor Mancini.

Ministerial Crisis.—The unsuccessful foreign and colonial policy of the Depretis ministry incurred the condemnation of the nation, which has felt dissatisfied with its diplomatists and sore toward the other powers ever since Count Corti returned empty-handed from the Berlin Congress. Russia acquired Bessarabia, Austria Bosnia and Herzegovina, England Cyprus, and finally it transpired that France was invited to take possession of Tunis, thus frustrating one of the fondest ambitions of Italy. In the negotiations with England respecting co-operation in the Soudan, Signor Mancini said that Italy could enter into no engagements that were contrary to the agreement concluded with the two empires. The Red Sea Expedition, however, was generally disapproved when the results and cost of the enterprise were weighed, partly because the new acquisitions appeared to be of no value, partly because the Government was expected to find a field for the colonizing activity of the Italians on the shores of the Mediterranean, and not in a quarter so remote as the Red Sea. On May 8 the Government was able to defeat a hostile motion in the Chamber by a majority of 91. On June 17, in a vote on the budget, the ministers found themselves with a majority of only 4 in a house of 322, and at once decided to resign. Cairoli and Minghetti, the leaders of the Opposition, conferred with the King with reference to the formation of a new ministry; but there were difficulties in the way. Signor Depretis was charged with the formation of a new Cabinet. The Radicals, who combined with the Conservatives in the hostile vote, were not strong enough in the Chamber to undertake the government. After a crisis lasting a fortnight, during which the Chamber finished voting the supplies and adjourned, the former ministers returned definitively to office with the exception of Signor Mancini and Signor Pessina, who was succeeded as Minister of Grace and Justice by Signor Tagani. Signor Depretis took the portfolio of Foreign Affairs *ad interim.* In October this post was given to Count Robilant. During the ministerial crisis the municipal elections in Rome occurred. The divided Liberals were opposed by the compact Clerical party, but gained a decided victory.

Legislation.—After a debate extending over three months, on March 6, in a vote by secret ballot, the Chamber of Deputies agreed by a majority of 23 to the leasing of the state railroads to the Adriatic, Mediterranean, and Sicilian Railroad Companies. No measure ever carried in the Italian Parliament met with so vigorous and obstinate a resistance.

The Madonna of Corano.—A supposed miracle at Corano, a village in the mountains near Piacenza, was the cause of manifestations of religious enthusiasm among the people of the district that became a delirious excitement and called for the interference of the civil authorities. On June 30 a little girl told a story of seeing a lovely lady who said she was the Madonna. As many as 16,000 persons, mostly women, collected at the spot, where a shrine was erected. Many in their ecstasy believed that they saw or heard the Virgin. Medical men reported that the hallucination was spreading to a dangerous extent. The Prefect of Piacenza sent a number of troops to the syndic of the village, who on July 31 took down the shrine, cut down the bushes on which offerings were hung, and made the steep path to the spot inaccessible. Many remained until night to witness the expected miraculous appearance of the Virgin, and then went away disappointed.

Sanitary Conference. — A conference of delegates of the powers met at Rome May 20, to discuss international measures to prevent the spread of infectious diseases. The initiative steps toward the assembling of the conference were taken by the Italian Government upon the reappearance of cholera in Egypt in 1883. Gen. Cadorna presided over the meetings. The powers were represented by the members of the diplomatic body in Rome, and by technical delegates. Dr. Sternberg represented the United States on the technical commission. The discussion of the causation of cholera, on which Prof. Lewis, the Indian delegate, and the English delegates differ with Dr. Koch, the German representative, and most of the other delegates, was excluded from the deliberations of the technical commission. On the question of preventing the importation of Asiatic cholera by way of the Suez Canal Dr. Brouardel proposed that vessels arriving at Suez from infected ports should be subjected to medical inspection, and if there were indications of cholera on board that the ship should be disinfected, the persons supposed to be infected sent to a hospital, and the others isolated for five days in a lazaretto. The British delegate insisted that British vessels from India should not be detained, but that the canal should be regarded as an arm of the sea. The French proposition was strongly supported by the German and Italian delegates, and was carried in the technical commission by the unanimous vote of all excepting the British and Indian delegates. Rigid inspection of passengers arriving from eastern countries in which cholera exists, by rail, road, river, or over the Caspian Sea, was likewise approved. In the plenary sitting of the conference after the reception of the report of the technical commission, on the motion of the German ambassador the conference adjourned until November, in order to give the Governments time to examine the recommendations of the technical commission. The quarantine question, after the separation of the conference, was made the subject of diplomatic discussion between the European governments. As England continued to resist the proposal for observation and isolation in the Red Sea, there was no reassembly of the conference in November. The failure of the conference was one of the causes of dissatisfaction that led to the ministerial crisis in Rome. Cholera reappeared in the Italian province of Alexandria in August, the contagion having been introduced form Marseilles, but there was no epidemic.

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JAPAN. The European name of this empire and archipelago in the North Pacific Ocean, lying east of Corea, is a corruption in Portuguese mouths of the pronunciation of the Chinese characters by which it is expressed. The Japanese pronounce them *Ni'hon* or *Nip'pon.* The term in pure Japanese is *hi no moto* (beginning of day). Japan is thus the land where the day begins. The name was evidently applied by the settlers coming from the Asian mainland, by way of the Corean Peninsula. Its territory is about equal to one and a half time that of the British Isles.

Population.—By the last census (1883) the number of inhabitants is 37,442,966. Of these 18,950,159 are males and 18,492,807 females, living (in 1875) in 7,389,371 houses or tenements. In Tokio the average of persons to each dwelling is 4; in Awomori *ken*, in the north, 5·8; in Osaka, 3·7. In the poorer rural districts the houses are more crowded than in the cities, and in the northern or colder portions more than in the southern and warmer. The number of children under fourteen years is about 10,000,000; of the nobility and gentry, 2,000,000; of other classes not active producers, 5,000,000; leaving 20,000,000 active producers. Of every 10,000 people, 4,533 are of the agricultural class, 213 manufacturing, 390 commercial, and 702 follow other callings, while 4,142 have none that are known or classified.

Nobility.—In the peerage are 11 princes, 24 marquises, 76 counts, 324 viscounts, 74 barons, total, 509. Persons who have received decorations for merit, among whom are Americans to whom were awarded tokens of the third or fourth class, number 105. The highest order of merit is awarded posthumously.

The population of Tokio, on the Sumida river, is 1,091,161. Of foreigners in 1878 there were 711, and in 1884, 700. Yokohama, besides a native population of 65,000, contains 3,700 foreigners. It has 5 banks, 15 foreign and 2 Japanese steamer lines, 4 churches, 4 newspapers, 5 hospitals, 17 consulates, and 89 insurance companies.

Labor and Wages.—Until the revolution of 1868, as the Government of Japan was absolute and irresponsible, the laborer had no rights but such as the privileged class conceded. No courts for the trial of causes arising between the workman and his superiors were in existence. To petition his prince or the shō-gun was as much as his life was worth. The common people were bound to the soil, and could not leave it without permission. Insolence or insubordination from a mechanic to a sword-wearer was sufficient justification for the latter to take the life of his inferior. Now the condition of the working-man is vastly bettered. He can claim the intervention of the courts to compel the payment of wages, and can be heard even against the highest classes. His wage-earning power has also increased, and education is free to himself and to his children. The average pay of a farm-laborer is $35 a year with board, or $50 without. Women get from $8 to $10 a year with food, and from $25 to $30 without food. Skilled mechanics, especially in the large cities, earn more. The average rate of daily wages in Tokio is, in cents, of carpenters, 40 to 60; paper-hangers, 30 to 60; plasterers, 45 to 55; stone-cutters, 60 to 75; blacksmiths, 30 to 50; roofers, 65 to 75; tile-makers, 40 to 60; carters, 35 to 45; painters, 25 to 35; gardeners, 25 to 50; laborers, 20 to 30; good porcelain-decorators, 75 to $1.50; good bronze-inlayers, $1.00 to $1.50; ivory-carvers, 40 to $1.00; lacquerers, 20 to $1.25. Professional workers receive as follows: Writers, translators, interpreters, $10 to $50 a month; clerks, salesmen, and book-keepers, $10 to $20 a month, including board; the average yearly salary of all the school-teachers in 1878 was $44.72. The average physician receives a call at his office and gives medicine for from 12½ to 20 cents. A few highly skilled professors, lawyers, and physicians in the capital receive much higher fees, but a salary or income exceeding $1,200 per annum is rare. In the humbler or average class the annual rent of a house is $6, and the amount necessary to furnish a house, exclusive of mats and luxuries, is $5.36. The cost of a farmer's clothing is $4 or $5 a year, that of a mechanic from $6 to $8. Food in the country districts is almost entirely vegetable, and in the poorer sections rice is a luxury.

Great changes are now being wrought in the social condition of the middle classes, and the dress and style of hair of the women conformed to foreign fashion, thus necessitating shoes, bonnets, and underclothing. Luxurious habits are becoming common. Women appear more in public and mingle in social life; etiquette is modified. Out-of-door sports and gymnastics—hawking, gunning, fishing, and other active amusements, once unknown except to professionals or the leisured classes—are now increasingly indulged in by merchants and mechanics. Before the opening of the country to foreign intercourse, all the alcoholic drinks known, whether made from rice, barley, fruit, or potatoes, numbered thirty-three. Of foreign and native containing alcohol, one hundred and thirty-three are now on sale.

Soil, Climate, and Crops.—Most of the soil of Japan is a black vegetable mold from two to ten feet in depth, superimposed upon a deep clay subsoil. Its excess of humic acid renders its fertile elements more or less insoluble, but with lime or potash every product of the latitude grows luxuriantly. The chief fertilizer is human ordure, and hence the soil in the vicinity of large cities is of the best working quality. In addition to the plentiful supply of water by the system of canals and rivers, the average number of rainy days in one year noted at one station was 97·52, and the rainfall 71·17 inches, the precipitation varying in years from 42 to 122 inches. The land-tenure until 1868 was purely feudal, the military favorites of the shōgun leasing it at their pleasure to the farmers, who paid their rent in advance. Without a cold season, enforcing rest, the farmer in the mild climate raised the hardier crops in winter. Even then, with constant toil, the husbandman barely secured a living. Since the abolition of feudalism in 1868, the land, which belonged in theory to the Emperor, has been sold, and is held in fee simple. About three tenths of all tilled land is now in the hands of smaller proprietors, the remainder being held in larger divisions. In old times the farmer jeoparded his life if he made complaint to obtain redress. Now he can educate his children, and, if paying $10 in land-tax, is an elector in the local deliberative assembly, which regulates taxes. The condition of the agricultural classes has been amazingly improved by the recent revolutions; but labor is still almost entirely of the hand and back. In 1879 there were but 900,274 horses and 814,324 cattle in Japan The laborer still carries burdens on his back, and much of his earnings go for transportation.

Rice, which is grown in all the sixty provinces, is the chief crop, rice-land being worth five times the value of ordinary tilled land, or about $200 an acre. In feudal days all rice was stored and none exported. It is now sold and exported under limitations. The land-tax is the great source of revenue. In 1875 12,000,000 acres were under cultivation. The value of the rice-fields in the empire in 1884 was $1,219,506,637, averaging $463.51 per *chō* (108,000 square feet), or about $40 an acre. The crop of 1883 produced 30,474,834 *koku* (168,000,000 bushels), valued at $4,397 a *koku*, making $133,997,845 in all. Of 6,500,000 acres planted with rice in 1878, the crop was 180,000,000 bushels, the average yield being 30 bushels to an acre, and the total value being $202,521,750. The government-tax on low irrigable rice-land is $5 an acre. The land-tax is 2½ per cent., and that for local purposes ½ per cent., making 3 per cent. in all. Four or five acres of rice-land and one or two acres of bluff or timber-land form a respectable holding. The homes of the rice, silk, and tea farmers are the best of all agricultural laborers'. In 1878, 38,000,000 bushels of wheat, worth $19,000,000; 60,000,000 bushels of barley, worth $36,000,000; beans, vegetables, fruits, etc., worth $35,074,781; 90,000,000 pounds of tobacco, worth $7,500,000; 60,000,000 pounds of tea, and in 1875 $11,640,977 worth of silk, were grown. In 1884, $10,000,000 worth of fish were caught. Formerly the whole governmental revenue was derived from the land-tax. As compared with European countries, it will be seen that even with the approach to equalization of taxes by the adoption of Western methods, and notably of the American system of internal revenue, the Japanese farmer still bears the heaviest burden. The percentage that the land-tax furnishes to the general revenue in Great Britain is 3·3, in France 1·6, in Italy 8·3, in Austria 7·1, in Japan 56·4. The tax paid by the Japanese farmers amounts to $75,982,969.

Education.—The plans made in 1872, for a national system of public education that should include the founding and equipment of nearly 55,000 public schools, are steadily approaching realization. One powerful influence to secure this is the presence in the country of large numbers of native young men who have been educated in Europe and America. The first students to the United States, who arrived in New York in 1866, for the purpose, as they said, of learning "how to make big guns, so that European nations should not conquer their country," were Isé and Numagawa. They were followed by others, who had jeoparded their lives in leaving Japan. These were educated mostly at New Brunswick, N. J. During the civil war of 1868–'70 in their own country, they were supported by American gentlemen who made advances until the Mikado's government, restored to power, paid the loans. In a document signed by the imperial envoys of 1872, it was declared that this act of kindness had done more to dispose the Japanese toward the acceptance of foreign civilization than any other cause or series of causes. From 1865 to 1884, 594 young men studied abroad at government expense. Of these, nine graduated from American colleges, and thirty-five are now in the public service of Japan. Nearly an equal number studied abroad at private expense, some of whom graduated in full course from colleges or higher schools of special science. The number of Japanese of all ages, who have for longer or shorter periods sought knowledge in Christendom, is reckoned at 3,000. At present, only graduates of the University of Tokio are sent abroad, and these mostly to Germany. Some of the returned students founded in Tokio, Nov. 29, 1884, a school of English and American law, with a full faculty, a three years' course, and a class of students who use the English and vernacular tongues. Medical science and art have made great progress in late years. There are now 31 medical schools and 350 hospitals, supported by the prefectures, and 294 hospitals self-supporting. The Medical College in Tokio has five German professors and 1,061 students in all departments. The preparatory course, in the vernacular, covers three years; the main course, chiefly in German, four years. There is also a branch school of pharmacy. Of the total of 665 hospitals in operation, 487 are general, 130 venereal, 5 *kakké*, 5 lepra, 9 ophthalmic, 1 lying-in, 1 fracture and dislocation, 2 surgical-general; and one is an institute of vaccination, etc. There are also sick-quarters connected with most garrisons and prisons. Medical societies and journals are numerous and steadily increasing. There are nine foreign medical missionary physicians. English is studied in the common schools, and the national use of the Roman letter seems to be near at hand. The Romaji Kai, or Roman Alphabet Association, is composed of native and foreign scholars. They have accomplished by a simple system, and the use of twenty-two Roman letters, the reduction of all possible Japanese sounds and vocal combinations to expression in common English type. They print a newspaper, and will issue grammars, dictionaries, text-books, and the native classic and popular literature in the Roman letter. It has been demonstrated that a native child can learn to read and write as much of his own language in one year as formerly he was able to accomplish in ten years. There are now 30,552 public educational establishments, of which 29,081 are common schools, 173 colleges, 6 higher female schools, 78 normal schools, 2 universities, and 1,212 schools for special purposes. The number of pupils is 3,090,918. The decree of the educational department adding the English language to the common-school curriculum was issued Nov. 29, 1884.

Art and Art Industries.—The love of art, which has penetrated to the lowest classes, has made the Japanese an art-producing people. They invented the folding fan, fine and gold lacquer-work, and cloisonné on faïence and porcelain—though translucent porcelain was not known in Japan until the seventeenth century. Kaolin clay is now found in 283 places. With the changed conditions of labor, the artist and artisan seek outlets in foreign trade for their wares. The Government supervises the attendance of men and products at all the national exhibitions of any importance throughout the world. In London, in 1884, the Japanese obtained one gold, four silver, and fifteen bronze medals for excellence in artistic work. Of fans 2,769,684 were made for export by one firm in Tokio in 1884. The export of art products in 1884 amounted to $1,445,458.04. Heretofore most of the finest work, even embroidery and needlework, was done by men; but of late years women are engaging in the lucrative trades. In heavier manufactures, there was forged at Osaka last year a 28-centimetre gun, which will carry 4½ miles. The Japanese attend congresses of modern art and science abroad.

Telegraphs.—Japan has now 5,056 miles of telegraph lines constructed. In 1884, 350 miles of new line were made, and 117 miles removed or abolished. The total length of wire operated is 13,972 miles, with 48 miles of submarine cable, containing 108 miles of wire. In 1884, 1,247 miles of new wire was strung, and 301 miles removed. At the Yokohama office, 243,842 messages were sent, of which 115,329 were in native speech. Telegraph-offices now open number 199.

Transportation.—No general system of roads existed in old times, and land transportation was almost wholly on the backs of men and horses. As yet there are not 1,500 miles of carriage road. As probably no part of the country, except in Yezo, is over 100 miles from the sea, cheap oceanic transport is available. The Union Shipping Company (Kiyodo Unyu Kuaisha) is the chief, the Government being a stockholder. It employed, in 1884–'85, 26 sailing-vessels of European build, 31 steamers, and 14 cargo-boats. Its capital was $6,000,000, and the amount of business transacted last year was $4,211,288, with, however, little or no profit, owing to the ruinous competition between this and a rival company, the Mitsu Bishi (Three Diamonds). The two have since been consolidated, and the transportation war is over. From Oct. 1, 1885, the new company, Nippon Yusen Kuaisha (Japan Mail Shipping Company), assumes control, with offices, staff, and business facilities, in the chief ports of Japan, in the outlying islands, in Corea, and in Shanghai, China.

Most of the railroads, of British construction, are owned and operated by the Government. All rolling-stock was at first imported, but now the cars are built near Tokio, and only the engines, axles, wheels, and buffers made abroad. Owing to the many mountain ranges and spurs, numerous tunnels and bridges are necessary. Except the line in Yezo, from Sapporo to Pororai, 56½ miles long, which is of American construction, and the rails 3 feet apart, the gauge is 3 feet 6 inches.

In 1884, 265 miles were open, 271 miles were in course of construction, and 543 miles were planned. Only one line, between Tokio and Yokohama, is double. The engine-drivers and station and train men are natives. Accidents very rarely occur, and the property is never wantonly destroyed by the people. The foreign staff of engineers, constructors, and foremen number 16, all British. The average speed of trains is 18 miles an hour. Most of the work of survey and construction is now done by the graduates of the College of Engineering in Tokio and by natives educated abroad.

TERMINI.	When opened.	Length.	Cost per mile.
		Miles.	
Tokio to Yokohama	1872	18	£34,263
Kobe to Osaka	1874	22	83,970
Osaka to Kioto	1876	27	20,875
Kioto to Otsu	1879	11¼	
Tsuruga to Ogaki	1884	49	
Sapporo to Poronai	1883	56¾	1,812
Tokio to Mayebashi *	1884	68¼	4,800
Shinagawa to Kawaguchi †	1885	18	4,615
Tokio to Kioto ‡	....	213	
Omiya to Utsunomiya	1885	50	
Osaka to Sakai	....	8	
Utsunomiya to Awomori §	....	398	
Tarui to Yokkaichi §	....	35	
Uyeda to Naoetsu §	....	70	
Otsu to Nagahama §	....	40	

* Native company, employs no foreigners; heavy outlay still required for bridges, etc.

† Branch line around Tokio to connect Yokohama with the north to Takasaki and Awomori.

‡ Over the Nakasendo road. Bonds for $15,000,000 have been issued by the Government to build it. Twenty-six miles now open.

§ Contemplated. Surveys made and partly finished.

Finances.—The debt and assets, as reported in the estimates of the Minister of Finance, June 5, 1884, are:

Foreign debt at 7 per cent. interest	$8,015,400 00
Decrease from 1884	460,672 00
Total of domestic and foreign debt	328,962,156 50

ASSETS.

Reserve funds	$45,971,535 83
Loans to Government	28,005,025 35
Reserve fund for famine	2,412,754 48
Reserve fund for special use	1,043,113 87

Paper money in circulation (now, Jan. 1, 1886, at par)	$89,909,230 00

Commerce.—The social condition of the merchant has vastly improved since the revolution of 1868, which modernized the entire nation. Many of the forms of organized commercial enterprise so common in Christendom were unknown in old Japan, but the methods and procedure of modern science applied to trade have been cultivated by native traders and capitalists, as the following statistics show: Commercial companies in Japan now number 3,338, with a capital of $51,402,069, distributed as follows: 275 agricultural industries, with $2,541,187; 968 commercial and manufacturing enterprises, with $13,155,887; 814 transport agencies, with $5,135,829; 1,045 loan agencies, with $16,388,689; 135 private banks, with $12,235,464; 35 savings-banks, with $556,762; 13 fishery companies, with $91,650; 8 mining companies, with $285,940; 2 insurance companies, with $700,000; 43 miscellaneous, with $310,661.

The Board of Revenue furnishes statistics for the trade of 1884, which was done by 652 steamers of 734,243 tons and 450 sailing-vessels entering from and 656 steamers of 738,145 tons and 492 sailing-vessels clearing to foreign countries. Of the total value of goods shipped in merchant-vessels entering from or clearing to foreign ports, amounting to $60,585,036.42, the sum of $34,503,928.11 was carried under the British, $11,124,011.18 under the United States, $8,263,626.86 under the Japanese, $6,598,055.43 under the French, and $2,592,125.48 under the German flag. Exports by Japanese merchants amounted to $5,125,459.77, and imports to $2,282,913.62. The former were chiefly rice, silk, and coal, the latter mainly machinery, beans and peas; hides, cotton, blankets, woolens, timber, arms and ammunition, and steamers. General exports included grain and provisions, $5,410,195.17; silk, $13,281,629.35; tea, $5,819,695.30; artistic products, $2,381,677.18. General imports included beverages and provisions, $318,137.84; books, $272,348.03; clocks and machinery, $845,854.41; drugs, paints, etc., $1,142,733.50; metals and manufactures, $1,551,290.67; oil and wax, $1,836,561.50; sugar and molasses, $5,475,095.07; textiles, $12,564,989,320; wines and liquors, $306,224.44. Great Britain imported $12,755,426.27, and exported $3,811,312.61; and the United States imported $2,448,850.28, and exported $13,107,232.85 worth of goods. The trade with China nearly balanced, amounting in gross to $413,070,218.80. Of bullion, $5,005,072 was exported and $5,611,758 was imported. The foreign trade of Japan in 1869 was $12,908,978 and $20,783,633, and in 1884, $33,016,430 and $28,821,027 in exports and imports respectively, the volume of trade in 1882 being the largest since 1868.

EXPORTS.

By Japanese	$5,125,459 77
By foreigners	26,728,392 00
For ships' use	1,208,050 26
	$33,061,902 03

IMPORTS.

By Government	$1,986,711 47
By Japanese	2,282,913 62
By foreigners	25,357,156 67
	$29,626,781 76

PORTS.	Exports.	Imports.	Customs collected.
Yokohama	$21,416,961 36	$19,039,990 60	$1,682,672 42
Kobe	6,463,600 00	7,646,938 47	617,938 87
Osaka	861,891 44	1,194,187 95	77,804 08
Nagasaki	3,772,513 01	855,741 86	146,551 27
Hakodate	378,913 03	5,004 82	18,132 87
Niigata	69,846 82	....	205 30
Shimonoseki	25,326 31	67,443 97	2,623 52
Hakata	6,183 09	2,534 92	103 20
Idzugahara	21,194 48	8,885 16	1,878 88
Total	$33,061,902 04	$29,626,781 65	$2,547,404 41

Notable Events.—In general politics the year 1885 was marked by the ratification of the treaty with China, May 7; the drafting of the civil code, Sept. 16; the amalgamation of the two competing Japanese steamship companies, Oct. 1; the reception by the Mikado, Oct. 12, of Bishop Osouf as the Papal legate; the garrisoning of Tsushima against possible Russian occupation; the immigration of 3,000 laborers to Hawaii; the conclusion of a money-order convention with the United States; the purchase of three ironclads in Europe, and the reception of the new United States Minister. An unusual fall of rain, with heavy typhoons, wrought much temporary distress, but the general crop was abundant. Cholera also ravaged the southern provinces, the fatal cases numbering 50 per cent. of all attacked. Earthquakes were frequent, but not unusually destructive. Five hundred and fifty-three of these seismic disturbances have been noted and recorded in nine years. The Seismological Society in Tokio is doing a good work in hope of being able to predict the throes of earthquake in Japan as a part of ordinary meteorology.

JEWS. Jewish Ministers' Conference.—A conference of Jewish ministers of New York and adjacent States—among whom were representatives of the most diverse schools of thought within the church—met in New York, Jan. 19, 20, 1885, to consult concerning action on grounds where combined efforts could be made without sacrificing doctrinal principles. The Rev. H. S. Jacobs was chosen president. Papers upon "Sunday Schools," by the Rev. Dr. Kohler and the Rev. A. C. Mendes, were followed by remarks by other ministers, and a committee was appointed to consider what steps should be taken for the systematization of Sunday-school work. The subject of text-books, the study of Hebrew, biblical and post-biblical history, and the study of Jewish ethics, ceremonies and duties, political and social, were referred to in the discussions. A prize of $200 for an essay on some Jewish subject was announced. Papers were read or addresses delivered on "The Jewish Pulpit" (Rev. Dr. Jastrow), "The Higher Charity" (Rev. F. De Sola Mendes), the "Hebrew Union College" (Rev. Dr. Philipson), and "The Drift of Modern Christian Thought" (Rev. Dr. Gottheil). A second meeting of the association was held in Philadelphia, April 13 and 14, when the Rev. Dr. Gottheil was chosen president, and papers were read by the Rev. Drs. Wintner, Szold, Kleeber, Kohler, and Schlesinger.

Convention of Reformed Jews.—A convention of thirty-five rabbis, representing the "progressive" tendencies of American Judaism, met in Pittsburg, Pa., in November. The object of the meeting was said by the Rev. Dr. Kohler, who originated it, to be to drop some of the traditional features of Judaism, particularly its national or Oriental character, and make it more conformable to the conditions of its life in America. A declaration of principles was adopted, consisting of eight articles, as follows:

In view of the wide divergence of opinion, of conflicting ideas, in Judaism to-day, we, as representatives of reform Judaism in America, in continuation of the work begun at Philadelphia in 1869, unite upon the following principles:

1. We recognize in every religion an attempt to grasp the infinite, and in every mode, source, or book of revelation held sacred in any religious system the consciousness of the indwelling of God in man. We hold that Judaism presents the highest conception of the God-idea, as taught in our Holy Scriptures and developed and spiritualized by the Jewish teachers, in accordance with the moral and philosophical progress of their respective ages. We maintain that Judaism preserved and defended, amid continual struggles and trials, and under enforced isolation, this God-idea as the central religious truth for the human race.

2. We recognize in the Bible the record of the consecration of the Jewish people to its mission as priest of the one God, and value it as the most potent instrument of religious and moral instruction. We hold that the modern discoveries of scientific researches, in the domains of Nature and history, are not antagonistic to the doctrines of Judaism, the Bible reflecting the primitive ideas of its own age, and at times clothing its conception of Divine Providence and justice dealing with man in miraculous narratives.

3. We recognize in the Mosaic legislation a system of training the Jewish people for its mission during its national life in Palestine; and to-day we accept as binding only the moral laws, and maintain only such ceremonies as elevate and sanctify our lives; but reject all such as are not adapted to the views and habits of modern civilization.

4. We hold that all such Mosaic and rabbinical laws as regulate diet, priestly purity, and dress, originated in ages and under the influence of ideas altogether foreign to our present mental and spiritual state. They fail to impress the modern Jew with a spirit of priestly holiness; their observance in our days is apt rather to obstruct than to further modern spiritual elevation.

5. We recognize in the modern era of universal culture of heart and intellect the approaching of the realization of Israel's great Messianic hope for the establishment of the kingdom of truth, justice, and peace among all men. We consider ourselves no longer a nation, but a religious community, and therefore expect neither a return to Palestine nor a sacrificial worship under the sons of Aaron, nor the restoration of any of the laws concerning the Jewish state.

6. We recognize in Judaism a progressive religion, ever striving to be in accord with the postulates of reason. We are convinced of the utmost necessity of preserving the historical identity with our great past. Christianity and Islam being daughter religions of Judaism, we appreciate their providential mission to aid in the spreading of monotheistic and moral truth. We acknowledge that the spirit of broad humanity of our age is our ally in the fulfillment of our mission; and, therefore, we extend the hand of fellowship to all who operate with us in the establishment of the reign of truth and righteousness among men.

7. We reassert the doctrine of Judaism that the soul of man is immortal, grounding this belief on the divine nature of the human spirit, which forever finds bliss in righteousness and misery in wickedness. We reject as ideas not rooted in Judaism the beliefs both in bodily resurrection and in Gehenna and Eden (hell and paradise) as abodes for everlasting punishment or reward.

8. In full accordance with the spirit of Mosaic legislation, which strives to regulate the relations between rich and poor, we deem it our duty to participate in the great task of modern times, to solve, on the basis of justice and righteousness, the problems presented by the contrasts and evils of the present organization of society.

The convention decided that the Sabbath ought to be preserved, as a bond with the past, and as a symbol of the unity of Judaism, but declared that there is nothing in the spirit of

Judaism to prevent the introduction of Sunday services in places where the necessity for such services is obvious. The question whether proselytes should be admitted without the rite of circumcision was referred to a committee to report upon in 1886.

The sentiments embodied in the convention's declaration of principles, by which the position and aims of the "Reform" party among the Jewish people were more clearly defined than had been done before, are deprecated by the orthodox members. The declaration respecting the binding character of the moral laws and ceremonies of the Mosaic system; the discouragement of the observance of the Mosaic and rabbinical laws respecting diet, priestly purity, and dress; and the abandonment of the expectation of the restoration of the Jewish state, are indicated by them as tending to invalidate the doctrines of the Bible being a divine revelation, and of the Jewish theocracy.

Alliance Israelite Universelle.—The Alliance Israelite Universelle has published an account of its work for the first twenty-five years of its operations, from 1860 to 1885. Its object is, while refraining from religious propagandism and avoiding political complications generally, to aid members of the Hebrew nation wherever they may be living, defending them against persecution, and sustaining schools among them. Its headquarters are in France, but its organization is spread over forty-three states, besides which there are special Austrian and English societies. It has 30,000 members, and an income of from 200,000 to 400,000 francs a year. It returns about 9,000 pupils in 49 or 51 schools, which are established along the southern and eastern littorals of the Mediterranean Sea—at Morocco, in Tunis, at Beirout, Aleppo, Damascus, Jerusalem, Smyrna, Constantinople, Adrianople, Salonica, Sophia, Philippopolis, Rustchuk, and in Bagdad. It also sustains a number of industrial schools, in which about 500 Jewish children are learning trades, and has attempted agricultural colonies at Jaffa and in America. Seven eighths of the income of the society is set apart for the schools. An endowment fund of 1,000,000 francs has been provided by Baron Hirsch for the schools in Turkey.

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KANSAS. State Government. — The following were the State officers during the year: Governor, John A. Martin, Republican; Lieutenant-Governor, A. P. Riddle; Secretary of State, E. B. Allen; Treasurer, Samuel T. Howe; Auditor, E. P. McCabe; Attorney-General, S. B. Bradford; Superintendent of Public Instruction, J. H. Lawhead; Insurance Commissioner, R. B. Morris. Judiciary, Supreme Court: Chief-Justice, Albert H. Horton; Associate Justices, W. A. Johnston and Daniel M. Valentine.

Legislative Session.—The Legislature met on Jan. 13, and adjourned early in March. Two hundred and eight acts became laws. A bill regulating the payment of employés in and about mines and factories failed to become a law. The following are among the acts passed:

To authorize the Board of Education of the city of Topeka to issue the bonds of their school district for the purpose of increasing school accommodations.

To complete the State road from Grantville to Topeka.

To authorize cities of the first class to provide parks and grounds for the inhabitants thereof.

Concerning crimes and punishments, and amendatory of section 36, chapter 31, General Statutes of 1868, regulating crimes and punishments, and repealing said section 36.

To amend an act entitled "An act regulating the jurisdiction and procedure before justices of the peace in civil cases," and repealing certain sections therein named.

Making appropriation for the Women's Department of the World's Industrial and Cotton Centennial Exposition at New Orleans.

Amending sections 1 and 4, chapter 76, laws of 1877, being an act entitled "An act authorizing a bounty on wolf, coyote, wild-cat, fox, and rabbit scalps."

To enable the County Commissioners of Sheridan County to fund the county indebtedness.

To locate and establish a State road from Lawrence to Topeka.

Authorizing the Treasurer of Trego County to pay off the bonded indebtedness of said county, and authorizing the State Treasurer to receive the same.

To permit certain stock to run at large in the territory east of Spring river in Cherokee County.

To relieve the county of Pawnee from the illegal levy of State tax for 1873.

To regulate the practice of dentistry and punish violators thereof.

Creating a Board of Pardons, defining their duties, and fixing their compensation.

Relating to cities of the first class, and to authorize provision for payment and issuing evidences of indebtedness therefor of unpaid amounts in cases of certain general and special improvements.

To enable the Board of County Commissioners of Ellis County to fund the county indebtedness.

Defining the boundaries of Harper County and repealing section 2, of chapter 73, of the laws of 1879.

Amending the assessment law.

Creating a Bureau of Labor and Industrial Statistics.

To provide for the erection of cottages, building of fence, laying of additional drainage, completing and perfecting system of heating and ventilation, and enlarging of the State Insane Asylum at Ossawatomie.

Providing for the erection of a building for the Asylum for Idiot and Imbecile Youth at Winfield.

Making appropriation for the State Normal School.

To provide for the filing of certified lists of county officers in the office of the Secretary of State.

Concerning teachers and studies in the common schools.

To repeal chapter 55 of the session laws of 1879 entitled "An act to authorize and empower the county of Leavenworth and cities of the first class to take up and refund their railroad bonded indebtedness, and repeal chapters 88 and 123 of the session laws of Kansas of 1877," approved Feb. 25, 1879.

To enable cities of the second class to extend their corporate limits.

Permitting the Board of County Commissioners of Barton County to fund its indebtedness.

Relating to cities of the first class, and amendatory and supplemental to an act entitled "An act to incorporate and regulate cities of the first class and repeal all prior acts relating thereto," being chapter 37 of the session laws of 1881.

Authorizing the Board of Regents of the Agricultural College to purchase additional land for experimental farming.

To authorize school districts and Boards of Education to adopt a uniform system of text-books, and to repeal section 1, chapter 157, laws of 1870.

To prevent incompetent or unauthorized persons from engaging in the practice of pharmacy; also, to regulate the sale of poisons and proprietary medicines, to prevent and punish the adulteration of drugs and medicines, medical preparations and chemicals, and to create a Board of Pharmacy.

To provide for a uniform system of examination of school-teachers.

To compel railroad companies to fence their roads.

To authorize mutual fire-insurance companies to provide for a guarantee fund.

To provide for the burial of honorably discharged ex-Union soldiers, sailors, or marines, who may hereafter die without leaving means sufficient to defray funeral expenses, and to provide head-stones to mark their graves.

To provide additional facilities for the Department of Natural History in the State University.

Providing for the formation of telephone companies.

To provide additional buildings at the Reform School.

To regulate the sale and to fix the weights and measures of certain oils.

To amend an act entitled "An act for the regulation and support of common schools," being chapter 122, session laws of 1876.

Relating to the liability of railroads for damages by fire.

For the submission of a proposition to amend the Constitution of the State.

Relating to injunctions and amendatory of section 253, of Article XII, of chapter 80, of the General Statutes of 1868.

Relating to public schools in cities of the first class, and amendatory of section 2, of Article X, chapter 122 of the laws of 1876.

To create a Board of Commissioners of Highways.

To provide for the erection of additional buildings at Olathe, for the Institution for the Deaf and Dumb.

Providing for the remodeling and repairing of the east wing of the State-House, and the erection of the central building thereof.

Amendatory of and supplemental to chapter 128 of the session laws of 1881, being an act entitled "An act to prohibit the manufacture and sale of intoxicating liquors, except for medical, scientific, and mechanical purposes, and to regulate the manufacture and sale thereof for such excepted purposes."

The Governor, in approving the last-named act, said:

> But in so doing I desire to state that I believe section 8 of this act confers upon a county officer very dangerous authority and power, which should not be vested in any officer, and which, in the hands of an unscrupulous man, may be grossly abused, without fear or possibility of his punishment. . . . Before approving the bill, however, I asked the opinion of the Attorney-General, and of the two eminent attorneys who are chairmen respectively of the Senate and House committees reporting this bill, as to whether this act would prohibit sales by wholesale druggists to legally qualified retail druggists, of liquors in quantities exceeding one gallon, and whether the provisions of section 3 could be construed as imposing the restraints and limitations therein set forth on sales by wholesale druggists in larger quantities to retail druggists legally qualified.

They replied in the negative.

John J. Ingalls, Republican, was re-elected United States Senator.

Prohibition.—On Oct. 5 the Governor addressed a communication to the Attorney-General, suggesting that, in view of the many conflicting statements concerning the operation of the prohibitory law, it would be well for him to ascertain by inquiry through official channels what were the facts. To this the Attorney-General replied as follows:

> From all the information I have been able to obtain, it appears to me that the prohibitory law is no longer an experiment, but, on the contrary, is being enforced as successfully as the laws against horse-stealing, murder, arson, or other crimes known to our statute. The communications seem to indicate that a greater per cent. of persons are convicted for violating the prohibitory law than for the violation of any other law. It appears that 79 per cent. of the trials have resulted in convictions. If we add to this the injunctions that have been granted, which are equivalent to conviction, the percentage is even greater. In conclusion allow me to say that Kansas has a population of about 1,250,000 people. It has eighty-five organized counties. In sixty-two of these counties only 525 convictions have been had for the violation of the various criminal laws of the State since Jan. 1, 1885; and 235 of that number are convictions for the violation of the prohibitory law. Fifty-two of the eighty-five counties in the State report that they have no saloons. Eight of the other counties report that the law is only partially enforced. Two counties say the law is not enforced, and we may infer very little has been done to enforce it. To the last two counties I will add the counties of Atchison, Ford, and Leavenworth, where the law is openly and notoriously violated, making a report from sixty-three counties in the State. The open saloon in Kansas, at the present rate of progress, will soon be a thing of the past.

Population.—The State census taken this year shows the rapid growth of the State. The following table gives the population by counties in 1885:

COUNTIES.	Population.
Allen	14,733
Anderson	13,192
Atchison	27,636
Barher	7.868
Barton	10,136
Bourbon	24,168
Brown	15,954
Butler	27,018
Chase	7,347
Chautauqua	15,021
Cherokee	25,003
Cheyenne	204
Clay	16,956
Cloud	20,174
Coffey	16,005
Comanche	2.579
Cowley	29,555
Crawford	25,378
Davis	8,672
Decatur	4,067
Dickinson	20.366
Doniphan	13,040
Douglas	25,092
Edwards	3,519
Elk	14,243
Ellis	5,046
Ellsworth	10,009
Finney	1,487
Ford	7.778
Franklin	22,184
Gove	595
Graham	2,889
Greeley	50
Greenwood	15,428
Hamilton	500
Harper	14,921
Harvey	16,787
Hodgeman	1,799
Jackson	13,213
Jefferson	17,563
Jewell	18,998
Johnson	15,604
Kingman	10,033
Labette	29,144
Lane	278
Leavenworth	42,799
Lincoln	8,269
Linn	17,157
Lyon	22,922
Marion	17,896
Marshall	21,532
McPherson	20,248
Miami	17,867
Mitchell	14,356
Montgomery	25,865
Morris	10,913
Nemaha	18,047
Neosho	18,936
Ness	3,096
Norton	6,508
Osage	26,183
Osborne	12,728
Ottawa	12,740
Pawnee	5,416
Phillips	10,383
Pottawatomie	18,189

COUNTIES.	Population.	COUNTIES.	Population.
Pratt	5,964	Smith	14,745
Rawlins	2,043	Stafford	5,959
Reno	20,294	St. John	93
Republic	17,540	Sumner	32,289
Rice	11,939	Thomas	981
Riley	12,142	Trego	1,886
Rooks	7,796	Wabaunsee	10,970
Rush	3,973	Wallace	197
Russell	6,665	Washington	20,753
Saline	15,381	Wichita	75
Scott	91	Wilson	15,491
Sedgwick	36,522	Woodson	8,913
Seward	713	Wyandotte	38,069
Shawnee	40,579		
Sheridan	2,205	Total	1,268,562
Sherman	62		

The census was taken on March 1. Clark and Meade counties, in the southwest part of the State, were organized subsequently. The population in 1880 was 996,096; gain in five years, 272,466, or 27·35 per cent. The population in 1870 was 364,399. The following are the chief cities of the State with their population in 1885:

CITIES.	Population.	CITIES.	Population.
Leavenworth	29,268	Fort Scott	7,867
Topeka	23,499	Emporia	7,759
Wichita	16,023	Parsons	7,245
Atchison	15,599	Ottawa	6,626
Wyandotte	12,086	Wellington	6,346
Lawrence	10,625	Newton	5,128

Growth and Development.—The Governor, in his message to the Legislature in 1886, says: "An immense immigration has poured into our borders, and spread over every section of the State. Regions that, only a few years ago, were regarded as unfit for agricultural pursuits, have been occupied, and pronounced arable and fertile. Railroads are penetrating every section, and within a brief time it can be said that no county in Kansas is without facilities for transportation. Mechanical industries are being established in our principal cities and towns, and the commercial and agricultural prosperity of the State justly excites the pride of our own citizens."

Financial.—In March the State received from the United States $332,308.13, appropriated by Congress to reimburse expenses incurred in "repelling invasions and suppressing Indian hostilities." The following statement shows the amount of State bonds outstanding:

YEAR OF MATURITY.	Held by State funds.	Held by individuals or corporations.	Total amount.
1886	......	$17,000	$17,000
1887	$15,500	......	15,500
1888	30,000	......	30,000
1889	87,000	......	87,000
1894	12,500	......	12,500
1895	36,500	......	36,500
1896	38,000	32,000	70,000
1897	85,000	115,000	200,000
1898	136,000	84,000	220,000
1899	134,000	25,000	159,000
Total	$574,500	$273,000	$847,500

The $17,000 of bonds maturing in 1886, and the $15,500 maturing in 1887, are provided for by tax levies already made, leaving only $815,000 unprovided for. "In view of the fact," says the Governor, "that the bonded debt of the State, unprovided for, aggregates only $815,000, and that only $256,000 of this amount is held by individuals and corporations, I do not believe that it is wise or just to impose upon the present generation of tax-payers the burden of paying our outstanding bonds on their maturity. We can readily refund all outstanding bonds, as they fall due, into new bonds, bearing interest at not to exceed 3½ or 4 per cent."

State Institutions.—The Penitentiary has 862 prisoners. The Reformatory has been located near Hutchinson, Reno County, 640 acres of land having been given for the purpose. A site for the Soldiers' Orphans' Home has been selected near Atchison, which city has given the State 160 acres of land and $5,000 in cash for the use of the Home. The work of construction is in progress. The Asylum for Idiotic and Imbecile Youth is also in course of construction, near Winfield. A Bureau of Labor and Industrial Statistics was organized in April, and Frank H. Betton was appointed Commissioner.

Cattle-Diseases.—Rigid quarantine regulations were enforced, and no contagious or infectious diseases have been reported, during the year, among the cattle of Kansas. But a destructive epidemic of "hog-cholera" has prevailed in many counties. It is estimated that the direct losses aggregate $2,000,000.

Railroads.—The traffic returns of the different railway companies show a large increase in freight and passengers. The total tonnage hauled one mile during the fiscal year ending June 30, 1885, exceeded that of the previous year 106,669,993 tons, while the freight earnings for the fiscal year ending June 30, 1885, show a decrease, compared with 1884, of $2,131,753. The saving to the people of the State by the reductions in freight rates, secured chiefly by the Board of Railroad Commissioners, aggregates, for the fiscal year ending June 30, 1885, over $2,000,000.

National Guard.—Under the provisions of an act passed at the last session, the Kansas National Guard, comprising four regiments of eight companies each, has been organized, uniformed, supplied with camp and garrison equipage, and armed with breech-loading rifles of the latest and best pattern.

Temperance Legislation.—On this subject the Governor says: "The general working of the amended prohibitory law of last winter has been favorable. Organized opposition is fast disappearing, and the general and popular feeling is decidedly in favor of obedience to the Constitution as amended. Not only the Supreme Court, but all the Judges of the District Courts of the State, and the Judge of the United States Court for this Circuit, are in favor of allowing the people of Kansas to regulate their own domestic affairs in their own way. On Jan. 1, 1885, saloons were open in twenty or thirty towns and cities. A year later the open saloon had been banished from every town and city of Kansas, with possibly two exceptions, and in these active and determined legal efforts for its suppression have been instituted."

KENTUCKY. State Government.—The following were the State officers during the year: Governor, J. Proctor Knott, Democrat; Lieutenant-Governor, James R. Hindman; Secretary of State, James A. McKenzie; Treasurer, James W. Tate; Auditor, Fayette Hewitt; Superintendent of Public Instruction, Joseph D. Pickett; Attorney-General, P. W. Hardin; Register of Land-Office, John G. Cecil; Commissioner of Agriculture, John F. Davis; Insurance Commissioner, L. C. Norman; Railroad Commissioners, J. P. Thompson, A. R. Boone, and John D. Young. Judiciary, Court of Appeals: Chief-Justice, Thomas F. Hines; Associate Justices, William S. Pryor, Joseph H. Lewis, and William H. Holt.

Election.—On Aug. 3, a State Treasurer and members of the Legislature were chosen. James W. Tate, Democrat, was re-elected Treasurer, receiving 106,762 votes against 39,428 for all others. The Legislature consists of 24 Democrats and 4 Republicans in the Senate, and 80 Democrats and 20 Republicans in the House. The question of calling a Constitutional Convention was submitted to the people at the same time, but failed to receive a sufficient number of affirmative votes.

Finances.—Referring in his message to the subjects demanding the attention of the Legislature at its session, begun Dec. 30, the Governor says:

> In my message to the last Legislature, I called attention to the fact that while there was a balance in the treasury of $8,624.33 for the fiscal year ending June 30, 1883, we were owing $500,000 on temporary loans from the banks, which created an actual deficit of $491,375.67; and that there was no reasonable prospect of its being materially diminished for years with the resources of the treasury as they then existed. In view of these facts I urged the adoption of such measures as would not only insure the liquidation of our indebtedness to the banks at the earliest practicable moment, but place the treasury in a condition to promptly meet all its liabilities on demand. It was not found expedient to do so, however. On the contrary, our fiscal affairs were still further embarrassed by the diversion of revenues from the general expenditure to the school fund, aggregating in two years over $350,000, by appropriations which had not been anticipated, amounting to more than $284,000, and by the addition of $175,000 to the ordinary expenditures of the government in consequence of the unusual length of the session. To meet these additional liabilities of the general expenditure fund, the rate of taxation was increased five cents on the hundred dollars, yielding upon our accustomed rates of assessment an annual increase of revenue averaging about $160,000; and as a further means of preventing the anticipated deficit in the treasury, an act was passed directing the funding of the bank debt at a rate of interest not exceeding 5 per cent. per annum; in pursuance of which $500,000 in twenty-year bonds at 4 per cent. were negotiated as of June 1, 1885, at 2½ per cent. premium, and the proceeds, amounting to $512,500, paid in and accounted for as part of the receipts of the last fiscal year.

The balance in treasury to the credit of the several funds, at the close of the fiscal year ending June 30, 1884, was as follows:

General expenditure fund deficit	$183,029 16
Sinking-fund balance	$174,000 00
School-fund balance	131,340 83
Total	$305,340 83
Deduct deficit in general expenditure fund	183,029 16
Net balance	$122,311 67
The receipts during the fiscal year ending June 30, 1885, were	3,323,055 49
Total receipts from all sources, including balances	$3,445,367 16
Disbursements for the same period	2,919,779 40
Leaving balance June 30, 1885	$525,587 76

At the end of the last fiscal year there was a cash balance in the treasury to the credit of the general expenditure fund of $35,812.30, but at the same time there were unpaid balances of appropriations and claims against that fund aggregating $328,997.82, showing an actual deficit of $293,185.52.

The total amount of receipts from sheriffs for taxes during the fiscal year ending June 30, 1885, was $1,766,000.39, and that derived from all other sources of revenue, for general purposes, including $512,500 accruing from sale of bonds, was $1,467,363.30, making in all $3,233,363.69.

The assessed value of personal property for the year ending June 30, 1885, was $96,838,919; of real estate, $293,989,044; total, $390,827,963. The taxation is 52½ cents on $100.

Penitentiary.—The Governor says that the Penitentiary is in a better condition than it has been at any other period within the memory of the present generation. The number of convicts is over 1,000. They are contracted to a company for the term of four years from April 1, 1885. The contractors are to acquit the State of all cost for running the Penitentiary for four years, and pay into the treasury a bonus of $33,333⅓ for that term, with the right reserved to the directors to withdraw at any time as many convicts as may be required for work on the Branch Penitentiary, upon giving sixty days' notice.

The work of constructing the Branch Penitentiary at Eddyville has made good progress. The grounds embrace 80 acres. Up to December, 1885, $71,922.30 had been expended, leaving of the appropriation made by the last Legislature an available balance of $78,077.70.

State Guard. — The State Guard consists of sixteen companies of infantry and one of artillery, all fully equipped, thoroughly drilled, and ready for effective service. "In consequence of the disturbed condition of affairs in Rowan County during the past summer," says the Governor, "it unfortunately became my duty to keep from seventy to ninety men of this force on active duty for several weeks."

Education. — There has been a steady and gratifying improvement in the character and condition of the common schools throughout the State during the past two years. An unusually large number of comfortable and commodious school-houses has been erected, the per capita increased from $1.40 to $1.65, the course of study enlarged, and a higher standard required of teachers. The school census, white and colored, with corresponding apportionment out of the school fund for the payment of teachers for the years ending June 30, 1885, and June 30, 1886, are as follows:

Pupils for the year ending June 30, 1885—	
White	514,167
Colored	97,839
Total	612,006
Apportioned to white children, per capita $1.55	$796,958 85
Colored, per capita $1.55	151,650 45
Total	$948,609 30
Pupils for the year ending June 30, 1886—	
White	524.274
Colored	99,654
Total	623,928
Apportioned to white children, $1.65 per capita	$865,052 10
Colored, $1.65 per capita	164,429 10
Total	$1,029,481 20

"It may be a matter of very just pride to the citizen of Kentucky," says the Governor, "to be able to refer to the fact that the per capita above shown is much larger than that apportioned from the treasury of any other State in the Union for the support of common schools, with but three exceptions; yet it must be apparent to all that $1.65 per annum to the pupil is by no means adequate to sustain anything like a competent system of education anywhere in this country."

The State College is entirely free from debt, and its material appliances for facilitating instruction constantly increasing. Large additions have been made to the chemical laboratories, the basis of a good botanical museum has been laid, and the cabinet of geological and mineralogical specimens is steadily growing. An Experimental Agricultural Station has been established. The staff of instruction in the Normal School has been doubled. The matriculation for the year will reach nearly 300, with class-room accommodations for a much greater number, and a corps of 16 professors and instructors.

Charities.—The whole number of the several defective classes accommodated in State institutions during the year, and the amounts drawn for each, were as follow:

INSTITUTIONS.	No.	Amount.
Eastern Lunatic Asylum	686	$83,129 07
Central Lunatic Asylum	810	73,177 50
Western Lunatic Asylum	675	67,464 80
Institution for Feeble-minded	171	29,349 65
Institution for Deaf and Dumb	131	29,396 65
Institution for Blind	77	14,415 00
Total	2,550	$296,932 67

In addition to this sum there was paid during the year:

For pauper idiots	$62,089 63
For lunatics in counties	9,318 15
For conveying lunatics to asylums	8,890 92
Total	$80,298 70

Making the total amount expended on account of public charities, $377,231.37.

There is need of further accommodations in the lunatic asylums. The Governor recommends the establishment of a State Board of Charities.

Railroads.—There has been an increase in the railway-track mileage within the State in the past two years of 191 miles, with four new and important lines in process of construction. The Railroad Commissioners estimate the value of railroad property in the State for the past year at $32,026,155, yielding a revenue to the treasury of $168,137.32. For the current year the value is placed at $38,646,344; mileage, 1,904. The litigation between the Commonwealth and certain railroad companies, involving the validity of the act authorizing the assessment of railroad property by the Board of Commissioners, which has been pending for several years, has been determined by the Supreme Court of the United States in favor of the constitutionality of the law.

Coal-mining.—While there were but six coal-mines in operation in the State in 1870, with a total output of 169,120 tons; in 1884 there were over seventy, with a product from those under the supervision of the inspector alone of 1,550,000 tons, furnishing employment to nearly 4,500 persons, at wages aggregating annually $1,500,000. The Governor remarks:

> I alluded in my former message to the discovery, then recently made by the Geological Survey, of a remarkable deposit of coking coal in that region. Since that time its area has been traced to an extent of fifty by twenty miles, over portions of Pike, Letcher, Harlan, Leslie, Floyd, Breathitt, Knott, and Perry Counties, and its quality ascertained, by actual test, to be superior to that from which the famous coke of Connellsville, Pa., is made.

KNIGHTS OF LABOR, an order established in Philadelphia in 1869, by Uriah S. Stevens, a clothing-cutter, as the beginning of a national association for the protection of working-people and the development of educated labor. In 1871 this first society, largely composed of clothing-cutters, was regularly organized as Local Assembly No. 1. A ritual was adopted, and the society was called the Noble Order of the Knights of Labor. All its workings, and even its name, were to be kept by members an absolute secret, under penalty of dismissal, necessary public reference being made by the use of five asterisks or stars, until 1881, when the name was made public. From this organization the order increased among the workmen in Philadelphia, until nearly all trades were represented. It was soon established in Pittsburg with a strong membership among the coal and iron workers. In 1878, in convention, a General Assembly of North America was formed, with the supreme office of General Master Workman. The present organization of the order consists of an executive board, composed of a president and three members, elected annually in October by the General Assembly, which is composed of delegates from the district assemblies, which receive delegates and funds from the local assemblies, at the same time being subject to the executive board. The local assemblies are each made up, whenever possible, of workers in the same trade or calling—as one of shoemakers, another of printers, etc. There are also mixed local assemblies, which unite in one assembly workers not represented in others. The aim of the order—its motto being "An injury to one is the concern of all"—is, as now explained, to organize, agitate, and educate, with the view of a final solution of the labor problem. In its Declaration of Principles it is said: "We declare to the world that our aims are"—

1. To make industrial and moral worth, not wealth, the true standard of individual and national greatness.

2. To secure to the workers the full enjoyment of the wealth they create, sufficient leisure in which to develop their intellectual, moral, and social faculties; all of the benefits, recreation, and pleasures of association; in a word, to enable them to share in the gains and honors of advancing civilization.

In order to secure these results, we demand at the hands of the State:

3. The establishment of Bureaus of Labor Statistics, that we may arrive at a correct knowledge of the educational, moral, and financial condition of the laboring masses.

4. That the public lands, the heritage of the people, be reserved for actual settlers, not another acre for railroads or speculators; and that all lands now held for speculative purposes be taxed to their full value.

5. The abrogation of all laws that do not bear equally upon capital and labor, and the removal of unjust technicalities, delays, and discriminations, in the administration of justice.

6. The adoption of measures providing for the health and safety of those engaged in mining and manufacturing, building industries, and for indemnification to those engaged therein for injuries received through lack of necessary safeguards.

7. The recognition, by incorporation, of trades-unions, orders, and such other associations as may be organized by the working masses to improve their condition and protect their rights.

8. The enactment of laws to compel corporations to pay their employés weekly, in lawful money, for the labor of the preceding week, and giving mechanics and laborers a first lien upon the product of their labor to the extent of their full wages.

9. The abolition of the contract system on national, State, and municipal works.

10. The enactment of laws providing for arbitration between employers and employed, and to enforce the decision of the arbitrators.

11. The prohibition by law of the employment of children under fifteen years of age in workshops, mines, and factories.

12. To prohibit the hiring out of convict-labor.

13. That a graduated income-tax be levied.

And we demand at the hands of Congress:

14. The establishment of a national monetary system, in which a circulating medium in necessary quantity shall issue direct to the people, without the intervention of banks; that all the national issue shall be full legal tender in payment of all debts, public and private; and that the Government shall not guarantee or recognize any private banks, or create any banking corporations.

15. That interest-bearing bonds, bills of credit, or notes, shall never be issued by the Government, but that, when need arises, the emergency shall be met by issue of legal-tender, non-interest-bearing money.

16. That the importation of foreign labor under contract be prohibited.

17. That, in connection with the post-office, the Government shall organize financial exchanges, safe deposits, and facilities for deposit of the savings of the people in small sums.

18. That the Government shall obtain possession, by purchase, under the right of eminent domain, of all telegraphs, telephones, and railroads, and that hereafter no charter or license be issued to any corporation for construction or operation of any means of transporting intelligence, passengers, or freight.

And while making the foregoing demands upon the State and National Government, we will endeavor to associate our own labors:

19. To establish co-operative institutions such as will tend to supersede the wage system, by the introduction of a co-operative industrial system.

20. To secure for both sexes equal pay for equal work.

21. To shorten the hours of labor by a general refusal to work for more than eight hours.

22. To persuade employers to agree to arbitrate all differences which may arise between them and their employés, in order that the bonds of sympathy between them may be strengthened and that strikes may be rendered unnecessary.

The insurance branch, established in 1882, and existing under the mutual-benefit system, is an addition to the original plan. Its aim is to pay $500 at the death of a member, by means of twenty-five-cent assessments. The entrance-fee to this branch is $1.25 for those between the ages of eighteen and fifty years.

The co-operative branch, also an addition to the original plan of the order, is intended for the establishment of stores upon a cash basis of trade, and the co-operative working of mines, factories, etc.

Any person of good standing in his trade or calling, who is not less than eighteen years of age, without regard to sex, color, creed, or nationality, is eligible to membership unless he belongs to one of the "interdicted classes," in which are named bankers, brokers, lawyers, liquor-dealers, or those deriving benefit from the sale of liquor. Women are admitted in equal standing with men, and upon the same conditions. The costs of membership are the initiation fees, regulated by each local assembly for itself, varying from $1 to $25; the monthly dues, regulated according to actual needs of the assembly, and varying from ten cents to forty cents; and a small per capita tax to the General Assembly of North America.

Although subject through the district assembly to the executive board, local assemblies have the power to "boycott" (to enjoin an oppressor) any person or persons within their local precinct. When considered necessary, the boycott is "put on" through the publication of the names of persons whose action may be deemed unjust toward labor, or the specification of manufactured articles or merchandise offered for sale, which, through the manner of production or otherwise, should not, it is judged, in the interest of the order, be purchased. A boycott, if found to be unjust or without good cause, may be "taken off" by order of the executive board. A "strike" may be ordered by local assemblies; but to draw support from the order outside of the striking assembly it must be "legalized," that is, the district assembly must be notified and an investigation made, after which, if the necessity for the strike is granted and no agreement can be arrived at, the strikers are entitled to the support of the district, and, in case of extension and need, to that of the whole order through a general assessment.

In the absence of direct statistics, semi-official estimates place the membership of the order at nearly 500,000.

KNIGHTS OF PYTHIAS. The order of Knights of Pythias, which, as set forth in the Declaration of Principles adopted by the Supreme Lodge, is intended "solely and only to disseminate the great principles of Friendship, Charity, and Benevolence," with "toleration in religion, obedience to law, and loyalty to government," the object being "peace on earth and good-will toward man," was founded at Washington, D. C., Feb. 19, 1864, by Justus H. Rathbone, who had previously composed a ritual of a secret society, which, with the object as stated, he now submitted and explained to the members of a vocal association, called the Arion Glee Club. This was approved, an obligation of secrecy was entered into, and the society was organized, taking its name, as suggestive of its stated principles and object, from the incident related of the friendship of Damon and Pythias. The Grand Lodge of the District of Columbia was organized at Washington, April 8, 1864, and became the Provisional Supreme Lodge until Aug. 11, 1868, when, in accordance with the resolution of a convention, held under the Constitution of said Grand Lodge, at Philadelphia, the Supreme Lodge, Knights of Pythias, was organized at Washington, to exercise "executive, legislative, and judicial functions over the whole order," and to be "known and recognized as the supreme authority of the Knights of Pythias of the world." The executive officers of the Supreme Lodge are: Supreme Chancellor, Supreme Keeper of Records and Seal, Supreme Master of Exchequer (under bond), Supreme Secretary of Endowment Rank (under bond), Major-General of the Uniform Rank, and Medical Examiner-in-Chief.

Each State, Territory, or Province is, for the purposes of this order, called a Grand Jurisdiction, having a Grand Lodge, which usually meets annually, composed of delegates from the subordinate lodges within the jurisdiction. The ranks in the order are, Page, Esquire, and Knight, with additional rank acquired by service in office, as Past Chancellor, in subordinate lodge; Grand Chancellor, who is the presiding officer in the Grand Lodge, and who ranks as Past Grand Chancellor after completing his term. There is also a Uniform Rank, attainable only by members of the Knight's Rank, which is distinct from the subordinate lodge. A uniform, with sword, is designated for its members, and military drill is prescribed. Subordinate lodges provide for the payment of weekly benefits to members of good standing, in cases of disability; and at death provision is made for a funeral benefit, and certain allowances to the widow or orphans. The Endowment Rank, instituted Dec. 1, 1877, provides for an endowment to the families of deceased members. It is operated upon a plan of monthly assessments, which are fixed and graded according to the age of members. The power to create, hold, and disburse its funds is vested in the Supreme Lodge. Upon each $1,000 monthly payments are as follow: Twenty-one years, 70 cents; thirty years, 80 cents; forty years, $1.10; fifty years, $1.60; sixty years, $2.55. The costs of membership are the initiation-fees, which vary, and the annual dues. These last can not be less than ten cents a week, but may be fixed by the lodge at a higher rate. Full membership is obtained by "white males, between the ages of twenty-one and fifty years, after being proposed by two members, recommended by an investigating committee as being of temperate habits, good moral character, sound bodily health, recognizing God as the Supreme Ruler of the universe, and having been balloted for and accepted as a Page, proved as an Esquire, and charged as a Knight."

From official records and estimates, it is shown that in 1885 the Supreme Lodge had supervision over fifty Grand Jurisdictions, with more than 2,000 subordinate lodges, and a membership of more than 160,000; $2,000,000 was reported as the balance in the treasuries of the Grand Jurisdictions; $4,500,000 as having been paid out in benefits by subordinate lodges; and $2,500,000 as paid on account of the death of members in the Endowment Rank.

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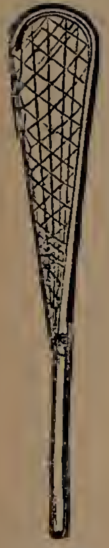
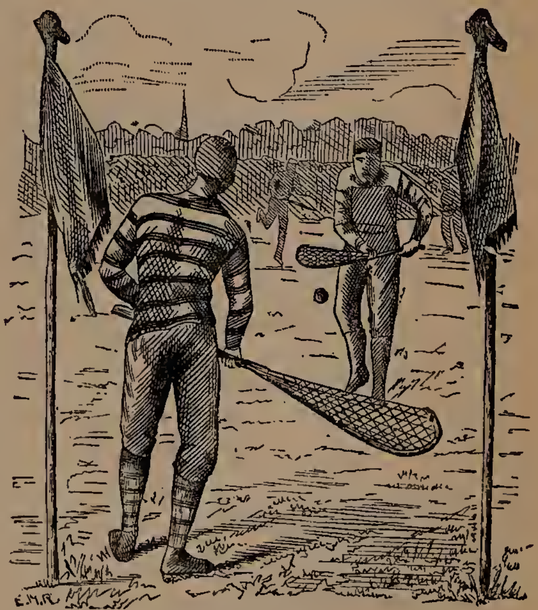
LACROSSE. The game of lacrosse—the national ball-game of the Dominion of Canada—is undoubtedly of Indian origin. Originally it bore different names, one (Indian) being "baggataway." The name it now holds was given it by the French settlers of Canada, suggested by the similarity of the form of the "crosse"—as the stick used in the game is called—to a crosier or bishop's pastoral staff. The game, as played by the North American Indians, was first seen by Europeans when the French explored the territory along the St. Lawrence river and the Great Lakes—the Algonquins not only playing it in spring and autumn on the grassy intervals along the rivers, but also on the ice in winter. The Indians used a ball of stuffed skin, and a bat like a hickory stick with a net of reindeer-hide attached to the curved part of it. The game was used by the Indians not only as a recreation, but also as a training-school in which to strengthen the muscles of their young warriors, and to accustom them to close combat. Lacrosse, on its fundamental principle, is similar to the old British sports of "golf" and "hockey," and in one respect to foot-ball, inasmuch as a ball is driven by the contesting sides from one goal to another: the side whose player first throws the ball from his crosse through the opposite goal wins the game, so many won games constituting a match. Lacrosse, however, differs from golf and hockey in the fact that the crosse or batting-stick is used not only to propel the ball along the ground, but to carry it, and to throw it from one end of the field to the other; while in the old English games the sticks are used simply to knock the ball. Lacrosse, as now played under the revised code of rules of the National Lacrosse Associations of Canada and the United States, is a very different game from that formerly played by the Indians. The crosse is different in shape and construction, and the size of the field of play has been greatly curtailed; while the goals are now distinctly marked out, and a special code of revised rules affords ample opportunities for skillful strategic play, without combination with the rough and brutal features of the original game. For the spectator, as well as the player, the interest never ceases from the moment that play is called until the ball passes the goal. Under the existing association rules, the field for skillful strategic play in the game is wide, its features being long distance and accurate throwing; excellence in catching the ball on the "crosse"; strategy in dodging an opponent while carrying the ball; pluck in checking the advance of an adversary toward the goal; skill in picking up the ball while running; surety in carrying it while on the run, and general pedestrian power in endurance. The defense of the goal is another feature that calls for remarkable quickness of sight and judgment, combined with dexterity of movement, while attacking a goal offers an ample field for strategic play as well as physical courage.

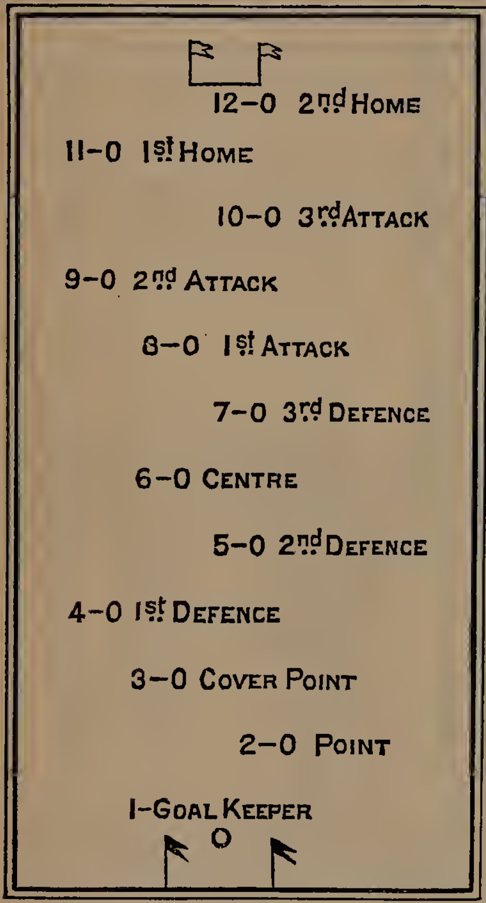

THE CROSSE.

Lacrosse was adopted by the white residents of Canada nearly forty years ago, but it was not till 1860 that it attained any degree of popularity. The Montreal Club was the first organized. By 1867 enough clubs had sprung into existence to start a national association. To Dr. George W. Beers, of Montreal, first Secretary of the National Lacrosse Association of Canada, the present success of lacrosse is largely due. Lacrosse was first played in Great Britain in 1867, when Mr. W. B. Johnson, of Montreal, took eighteen Indian players, of the Caughnawaga tribe, to England, where they exhibited the game before large assemblages, the result of the visit being the organization of several clubs in England and Scotland, and now lacrosse is a regularly adopted game in the British Isles. The game was introduced into the United States several years afterward through the medium of a club organization by the Mohawk Lacrosse Club of Troy, and the Maple-Leaf of Buffalo. In 1879 the first national association of the United States was organized, with Mr. Herman Oelrichs as its president and J. R. Flannery as its secretary.

The Game.—The game is played by twenty-four contestants, twelve on each side, with two captains (not necessarily players), two umpires, one at each goal, and a referee. The twelve players occupy the following positions: "Goal-keeper," "point," "cover-point," first, second, and third "defense-fielders," "center," first, second, and third "attack-fielders," and "first home" and "home-fielders." The twenty-four players are each provided with a crosse. The two captains are not allowed to carry a crosse, their official work on the field being simply to "coach" the players. At each end of the field of play stands a goal, which consists of two posts at each, six feet above the ground and six feet apart.


THE GAME.

The field varies in length and width, but the goals must not be nearer to each other than one hundred and twenty-five yards. The ball is made of sponge-rubber, and should weigh not over four ounces nor measure more than eight inches in circumference. The theory of the game is merely that of each side's striving to send the ball through the other's goal, and the side that does this the most times within a specified period wins the match. Sometimes a stated number of goals, such as best three out of five, wins the match. The rules prohibit the ball's being handled in any way; it must be picked up, carried, and thrown only by means of the crosse. The plan of the field and the positions of the players are seen in the appended diagram. These positions are those of one of the twelves; the other twelve take up corresponding positions. The home-players of one twelve face the point-players of the other side, as do the attacking players of one side the defense players on the other, the center players alone facing each other.



THE FIELD.

Playing.—The referee and umpires being in their places, and the two outside field-captains ready, the referee calls play, and the game begins. This is done by the two center-fielders "facing" for the ball, which is placed on the ground in the center of the field, and the game is begun by these two players struggling for the possession of the ball. One of them having got it on his crosse, he at once proceeds to run with it toward his opponent's goal, while the opposing players strive to knock the ball off his crosse by striking it with their crosse-sticks. If the runner finds himself crowded by his adversaries, he passes the ball to a player of his side, who then takes his turn in running toward the goal, and, as soon as he gets near enough to it for a safe throw, he endeavors to send it between the goal-posts, and, if he succeeds, he scores a goal for his side. In the contest for the possession of the ball from the face-off, the striking peculiarities of the game are developed in the form of picking up the ball, dribbling it along the ground, tossing it from one player to another, catching it on the crosse, throwing it swiftly and accurately toward the goal or from one end of the field to the other, dodging the attacks of opponents when carrying it, checking the advance of an adversary toward your own goal, and by skillful strategic play doing your utmost to score a goal in the shortest time. A goal may be scored within a minute's play from the face-off, or it may require half an hour's struggle. The moment a goal is scored, from five to ten minutes' intermission is allowed if claimed. After each goal is scored, the contestants change ends. The rules for foul play in the game are as follow:

No player shall grasp an opponent's crosse with his hands, hold it with his arms or between his legs, nor shall any player more than six feet from the ball hold his opponent's crosse with his crosse, run in front of him, or interfere in any way to keep him from the ball until another player reaches it.

No player with his crosse or otherwise shall hold, deliberately strike or trip another, nor push with the hand, nor wrestle with the legs so as to throw an opponent.

No player shall hold the ball in his crosse with his hand or person, or lie or sit on it.

No player shall charge into another after he has thrown the ball.

The crosse or square check, which consists of one player charging into another with both hands on the crosse so as to make the crosse strike the body of his opponent, is strictly forbidden.

No player shall interfere in any way with another who is in pursuit of an opponent in possession of the ball.

"Shouldering" is allowed only when the players are within six feet of the ball, and then from the side only. No player must under any circumstances run into or shoulder an opponent from behind.

The referee shall be the judge of fouls, and shall call time to decide them only at the request of the captains or the men appointed by them.

When a foul is allowed by the referee, the player fouled shall have the option of a free "run" or "throw" from the place where the foul occurred. For this purpose all players within ten feet of said player shall move away to that distance, all others retaining their positions. But, if a foul is allowed within twenty yards of the goal, the man fouled shall move away that distance from goal before taking the run or throw allowed him.

If a foul is claimed and time called, and the foul then not allowed, the player accused of fouling shall be granted a free "run" or "throw" under the conditions above mentioned.

No player shall throw his crosse at a player or at the ball under any circumstances; and such action will be considered a "foul." Should a player lose his crosse during a game, he shall consider himself out of play, and shall not be allowed to touch the ball in any way until he again recovers it. Kicking the ball is absolutely prohibited to players without a crosse.

For deliberate fouls which occasion injury to opponents or affect the result of the game, for the first offense the referee shall have power to suspend the player committing it for the rest of the game (not match). For a second offense the referee may remove the offending player and compel his side to finish the match short-handed.

Any player deliberately striking another, or raising his hand to strike, shall be immediately ruled out of the match.

Lacrosse has made rapid progress in popularity in the United States within the past three years, and especially in the great Universities of Harvard, Yale, and Princeton, where it bids fair soon to outrival the game of foot-ball. Lacrosse has flourished the past year in Boston more than in any other American city. In New York it has fully held its own with its rivals of the base-ball and cricket-fields. As yet, however, American lacrosse teams are unable to compete with the more experienced teams of Canada.

The lacrosse matches for the several championships of 1885 resulted in the success of the Montreal Club in winning the lacrosse championship of Canada, that club's team defeating both the Shamrock Club of Montreal and the Toronto Club, the recognized leading exemplars of the game in Canada. The lacrosse championship of the United States for 1885 was won by the St. Paul's Club of St. Paul. The college championship in lacrosse was won by the Harvard Club's team of Harvard College, and the championship of the metropolitan district, including New York and Brooklyn, was won by the Metropolitan Club team for 1885. In no year has lacrosse gained so much in popularity in the United States as in 1885.

LAND LAWS. In most of the countries on the Continent of Europe the laws regulating the distribution, transfer, and modes of tenure of land have been greatly changed within the past hundred years. Primogeniture, entails, and settlements have been abolished or greatly restricted in their operations; the registration of titles and incumbrances has generally been made compulsory; cheap and simple methods of transfer have been adopted, and all restrictions on the sale of land removed; feudal dues and services have been abolished or commuted; in many countries large numbers of tenants and laborers have been enabled by the power and credit of the state to purchase their holdings, and peasant proprietorship has been extensively introduced; and, where land is still cultivated by tenants, simple and equitable relations, based on contract chiefly, have usually taken the place of the old customary tenures. In several countries the laws compel the distribution of at least a portion of a man's property among his children. The French Civil Code provides that donations, whether as gifts *inter vivos*, or testamentary dispositions, shall not exceed one half of the property of the donator, or testator, if he leaves on his death one legitimate child; one third, if he leaves two; one fourth, if he leaves three or more; and that each child, or its representatives, shall receive an equal share of the remainder. Similar provisions are in force in a number of other countries. In general, the new legislation has sought to remove all obstructions in the way of the sale and transfer of land, to increase as much as possible the number of owners of real estate, and to associate the ownership of the soil with its cultivation. Not only have tenants and agricultural laborers become owners of land, but large numbers of artisans, shopkeepers, and others have found land a convenient and safe investment for their surplus earnings. In some places, particularly where the land is used chiefly for raising cereals, subdivision has been carried so far as to make the introduction of the best machinery and methods of husbandry impossible, and in some countries statesmen have been making efforts to guard against the evils of excessive subdivision. In Denmark and Mecklenburg-Schwerin subdivision has for some time been impossible or very difficult. While some evils have resulted from the new system, on the whole the masses of the people have derived great social, economic, and political benefits from this wide distribution among them of the ownership of land and the extensive introduction of peasant proprietorship. They have been made more prosperous, contented, and loyal.

Great Britain.—While these changes have been in progress on the Continent, the laws and customs in England have favored the concentration of the ownership of land among fewer persons; the yoeman farmers, who were quite numerous in the last century, have almost disappeared, and many of the large estates have become larger; very little of the land is cultivated by the owners; and it is commonly very difficult, if not impossible, for a tenant to purchase his holding. This tendency to the concentration of ownership is due largely to primogeniture, entails, and settlements; to the trouble, delay, and cost of investigating titles and making transfers; and to the social and political privileges that large land-owners have enjoyed. Many proposals have been made and a number of laws enacted for the purpose of unfettering land and facilitating its sale and transfer, so that it might pass easily into the ownership of those who are best able to develop its utmost capacities for production, and also for the purpose of giving those, who cultivate the soil greater encouragement to invest money and labor in increasing its productiveness. The recent great depression or the agricultural interests, produced by foreign competition, poor crops, and other causes, has increased the demands for the reform of the land laws. The discussion and legislation on this subject have for many years occupied so much of the attention of English writers and statesmen, the further changes proposed are so extensive, and the interest in them so great, that a general survey of the recent changes and present proposals seems desirable.

Primogeniture survived the abolition of military tenures through which it was generally introduced, but since their abolition, owing to the establishment of freedom of testamentary devises, it has been limited to cases of intestacy. The general custom of settling land or disposing of it by will has rendered the direct effects of primogeniture comparatively unimportant. Its abolition is, however, demanded by many on the ground that it is "the key-stone of the whole system" by which land is tied up, and because the doing away with it would pave the way for more successfully attacking the custom of settling land from generation to generation on the eldest son, and thereby creating what has been called "a general system of artificial primogeniture." Liberal statesmen generally, and not a few of the Conservatives, favor its abolition.

Entails.—Estates in tail, established by the statute *de donis*, were from the first regarded by many statesmen and writers and by the people as undesirable; but, defended by the nobility because they preserved family estates from forfeiture, they continued practically undisturbed for more than two centuries. Then the courts so applied common recoveries as to bar entails. A little later entailed estates were made liable to forfeiture for treason, the statute of fines was so construed as to furnish a means for terminating them, and they were abridged in other ways. In 1833 fines and recoveries were abolished, and the tenant for life was in most cases enabled to bar the entail by a deed enrolled in the Court of Chancery. But to protect family settlements, when under the same settlement that creates an estate in tail the parent or some one else holds a life-interest, the first tenant in tail in order to cut off the entail must have the consent of the tenant for life, who is called the protector of the settlement. It is not possible, therefore, absolutely to tie up an estate by entail for longer than the lives of persons living and twenty-one years and a few months afterward, when the first tenant in tail will of course be of age and able to alien the estate.

Settlements.—By combining what remains of the law of entail with various principles relating to trusts, and by the aid of devices for conveyancing developed under the statute of uses, land-owners have, however, been able, through successive settlements, pretty effectually to tie up the greater part of the land in the country. There are a great many technicalities connected with this system of strict settlement which custom and the general sentiment among the land-owning class have kept up. The general features of settlement are comparatively simple. A land-owner, A, wishing to settle property in his family, conveys it to trustees for the benefit of his son B, for life, giving an estate in tail to B's oldest son, C, and to B's other sons in succession, and also, on the failure of A's issue, to his younger sons in succession, and, on the failure of male offspring, to the daughters. He receives back from the trustees only a life interest, and, as his son has only a like interest, neither of them can alien the property. When, however, the first tenant in tail is of age, the estate may, with the consent of the protector of the settlement, be sold. Instead of aliening, the tenant in tail is likely, in consideration of being provided with an adequate allowance during the lifetime of his father, and for other reasons, to resettle the estate, keeping a life-estate for himself, giving his son a life-interest and an estate in tail to his grandson and others in succession. Provisions are commonly made in these settlements for widows, daughters, and the younger branches of the family, for improvements and for the sale of a portion or the whole of the property. When the settlement makes no provision for the sale, the Court of Chancery may order the property to be sold to pay off incumbrances or for other reasons. The sale of settled land has, however, always been a troublesome and difficult transaction. The Settled Estates Act of 1856 and the amending acts of 1858 and 1864 purported to render all settled property capable of sale, but they contained so many restrictions and provisos for guarding all possible actual and contingent interests that they were effective in but few cases. Additional powers were also given to tenants for life to make leases and borrow money to make improvements, but none of these measures removed the obstacles in the way of dealing freely with the land and using it for the best interests of all parties interested in it and of the public. Accordingly, the Settled Land Act (1882), of which Lord Cairns was the author and chief promoter, was passed, enabling the tenant for life to sell, or exchange, the settled land or any part of it, "except the principal mansion-house and the demesne thereof and other lands usually occupied therewith." He may also sell the principal mansion with its surroundings and the heirlooms of the family, if he has the consent of the trustees or an order of the court. The money derived from the sale may be used to pay off incumbrances, or may be invested in land or in securities of certain kinds by the trustees or court, according to the direction of the tenant for life. The tenant for life may lease the settled land, for building purposes for ninety-nine years, for mining for sixty years, and for other purposes for twenty-one years. He can not enlarge his own interest in the estate, but can deal pretty freely with the land and can leave the property wholly or partly in the form of money instead of land. Under this act many family collections of books and works of art and large quantities of land have come into the market. Owing to the great depression of the agricultural interests, the land has rarely been sold. It is generally agreed that the measure has pretty thoroughly undermined the system of family entails and strict settlements of land, and that, if carried out in the spirit in which it was framed, it will produce great changes. Lord Salisbury, who represents the Conservative view, recently declared that Lord Cairns's Act had gone quite far enough, that it had broken up all the objectionable features of entail, but still permitted a man to make, by means of settlements, proper provision for his daughters and their children. On the other hand, Mr. Gladstone and Liberal statesmen generally hold that further legislation is needed to carry out the purpose of the measure. Lord Hartington has said that the act was excellent, but the law was so carefully fenced in by protections in the interests of land-owners, and the legal profession had interposed so many obstacles to the working of the act, that up to the present time they had prevented its having any extensive operation. There are many who strongly advocate giving the trustees a wider discretion for the investment of the money obtained from the sale of settled land; giving the creditors of tenants for life greater power to compel the sale of settled property; and enabling the limited owner to compel a division of the proceeds of the sale between himself and the reversioner, and permitting the parent, where the tenant in tail is under age, to apportion the estate among his children. The absolute prohibition of entails upon unborn persons and upon successions of living persons is also strongly advocated. Measures that will unfetter the glebe-lands and lands that are the basis of charitable foundations, and facilitate their sale and transfer, have many advocates among statesmen of both parties, and would probably prove very beneficial to clergymen and charitable institutions, and bring large quantities of land into the ownership of those who cultivate it. The ecclesiastical commissioners, convinced that money invested in Government securities brings a larger and more certain income than that invested in land, are offering to sell their lands to tenants on favorable terms. Further legislation, however, seems to be needed.

Registration.—In the absence of a general system of registration for titles and incumbrances, the trouble and cost of looking up titles and making conveyances that shall guard all the interests that may be affected by the sale of a settled and incumbered estate are great obstacles in the way of its sale and transfer. These obstacles are often more formidable in the case of small properties, where the titles are apt to be more uncertain, than those of large estates. The proof of title was somewhat simplified by the Prescription Act of 1832 and the Real Property Limitation Acts of 1833 and 1874, but the work of making an abstract of title is in many cases still difficult, tedious, and costly. The Conveyancing and Law of Property Act (1881), the Solicitors' Remuneration Act (1881), and the supplementary act passed a year later, somewhat abridged the required length of deeds, and reduced the necessary cost of their preparation. It is obvious, however, that the transfer of land can not be made simple and inexpensive without a general system of registration. Local registries have long been in use in Yorkshire and Middlesex, and attempts were made under acts passed in 1862 and 1875 to induce land-owners generally to register their property. The provisions of these acts were, however, merely permissive and have been practically inoperative. Nearly all the leading statesmen of both parties are in favor of compulsory registration. The opposition comes from conveyancers, lawyers, and land-owners that are unwilling to give up their power of making secret transfers of or incumbrances on their estates.

Free Trade in Land.—Most of the advocates of these reforms believe that, when all obstacles in the way of the sale and transfer of land are removed, many of the large estates will soon be broken up, and that the number of land-owners will be rapidly and greatly increased. Lord Salisbury and some other Conservative statesmen, however, hold that the present tendency toward the concentration of ownership is in accordance with the laws of political economy, and that if the disposal and transfer of land were wholly unfettered, this natural tendency would be increased. All agree that these reforms would in many cases cause land to pass into the ownership of those who would have capital and motives for more fully developing its productiveness and for rendering it more beneficial to the country.

State Intervention.—Many of the Radicals urge the use of the power of the state to effect a wider distribution of land than is likely to result from the removal of all legal restrictions and obstacles to its sale and transfer. Some advocate the compulsory distribution of at least a part of a man's estate among his children. While few have ventured to advocate openly the general nationalization of land, numbers favor the restoration of the ancient rights of common over large tracts of it. The apportionment and inclosure of commons was until recently considered desirable in the interests of better cultivation and increased production, and a series of acts favoring and regulating it were passed. Under the provisions of these acts large tracts were inclosed. Of late, public sentiment and a number of statutes and decisions of the courts have shown a tendency to reverse the former policy by preventing further inclosures, and restoring some of the lands that have been inclosed without clearly provable legal right. Mr. Collings recently introduced into Parliament a bill providing for the restoration of commons that had been unlawfully inclosed, and requiring any one, who within the past fifty years had acquired or inclosed any wayside or common land, to show that he or his predecessors had acquired or inclosed it lawfully. In this way the advocates of restoration hope to compel private owners to open many parcels of land of a greater or less extent for the common use of small tenants and laborers. The land-owners claim that, even where one's title is good, it would often be extremely difficult to go back fifty years and prove it, and that such an act would increase the cost of transferring land, for it would throw suspicion on many titles and make additional investigation necessary when the lands were about to be sold.

Parliament has made many attempts by local and general acts to secure suitable dwellings and allotments of land for artisans and laborers. The local authorities have in some cases been given power to acquire by compulsory purchase land for this and other sanitary purposes. Owing to various limitations and restrictions, however, comparatively little has been done under these acts. At the last session of Parliament a measure of considerably wider scope, "The Housing of the Working Classes Act," was passed. This act enables local authorities, either in town or country, where additional house accommodation is shown to be necessary, to acquire, with the consent of the local government board, land by compulsory purchase, if necessary, and build cottages, allotting to each not more than half an acre of garden-ground, and letting them to laborers. The powers conferred are carefully guarded, and the danger of increased local taxation will, it is thought, prevent the excessive purchase of land and building of cottages.

"The Yeoman and Small Holdings Act," drawn up by Mr. Jesse Collings, Robert Reid, Mr. Broadhurst, and others, and introduced into Parliament at its last session, proposes to empower local authorities to purchase land compulsorily, if necessary, and resell it in holdings of not more than thirty acres each, advancing three fourths of the purchase-money. The tenant may repay one third of the loan, but the balance must remain, and the interest will be a perpetual rent charge on the holding. The local authorities may expend, or loan to the tenants, money for making improvements on these small farms, over which they are to exercise rather strict control, taking many of the powers and functions of the landlords. When the tenant of a holding of less than 150 acres agrees with the landlord for its purchase, the local authorities may advance him two thirds of the purchase-money. The Government will supply the local authorities with funds for these purposes at a low rate of interest. It is claimed by Mr. Chamberlain and his followers that the interests of the country and people demand the wider distribution of land and the general introduction of yeoman and peasant proprietors, that the state appropriates large sums of money for public improvements, and that it takes land by compulsory process, or permits local authorities, railroads, and other corporations to take it, for the benefit of the public, and that therefore the Government has a right to require the present owners to sell their land at a fair price where the interests of the people demand it, and ought to aid the purchasers with its credit. The land belonged originally to the people in common; in theory it is still held of the state, which may justly resume possession of it, if the interests of the public demand it and the owners are paid fair prices for their interests. A fair price would not be the potential value of the land—in view of the possibility of its use for building or other lucrative purposes, plus the allowance of ten per cent. for compulsory sale, allowances for severance, etc., according to methods now used for fixing the price of land acquired by compulsory purchase—but its present value for agricultural purposes. Many of the Conservatives and some of the moderate Liberals are strongly opposed to these proposals, claiming that compulsory purchase at prices fixed by local authorities, or the courts, would be unjust to the present owners, that the possibility of such purchase in any case would depreciate the value of land and discourage improvements, that the measure would greatly increase local taxation, and open the door for a vast amount of political favoritism and corruption, and that the new owners, hampered by many conditions and restrictions, and often without capital, could not compete with the large farmers, possessed of good farming machinery, stock, capital, and experience. The moderate Liberals generally seem to agree with Mr. Gladstone, that the legislature has an undoubted right to expropriate every landlord in the country if the public interest demands it, but question the present expediency of extensive compulsory purchase, and the general distribution of land by state aid, and are opposed to compelling landlords to sell at prices that would not be a full compensation for their rights and interests. The question was much discussed during the recent parliamentary election campaign, Mr. Chamberlain and his followers advocating compulsory purchase on an extensive scale, and at fair prices for agricultural purposes, of land to be resold or let to agricultural and other laborers. the Conservatives generally opposing the scheme, and the moderate Liberals opposing it, or giving it a qualified assent. Mr. Gladstone has declared himself in favor of providing, before resorting to compulsory purchase, for the sale of the many large tracts of land held by the Church, universities, colleges, hospitals, and other charitable institutions, in such small parcels, and on such terms as to payments, that many small tenants and laborers may become purchasers.

Landlord and Tenant.—In theory, all the land of the United Kingdom is still held of the Crown, and even the owners in fee simple are only tenants. The word landlord has, however, come to be applied in common usage to the man who lets, and tenant to the one who hires, land for a limited time. Since nearly all the land in the country that is under cultivation is cultivated by tenants, the law of landlord and tenant is of great importance. While there are leases of land for long terms of years, most of the tenancies are from year to year, many of them practically continuing for long periods. The tendency of legislation in recent years has been to increase the rights of the tenant, and encourage him to invest money and labor in making improvements and in rendering the soil more productive. Long ago the law gave the tenant at will the right to return and harvest the crop that he had sown but not yet reaped when he left the holding, in order that he might not lose the just fruit of his seed and labor. In time it extended the tenant's right somewhat, and presumed that, when he had paid rent and no term was specified, the tenancy was not a tenancy at will, but from year to year, and, that the tenant might not be put to loss or inconvenience by the sudden termination of his tenancy, required the landlord who wished to resume possession of the holding to give him six months' notice to quit. The Agricultural Holdings Act of 1883 made twelve months' notice necessary. The old law, as laid down in the statute of Gloucester, declared that whatever was affixed to the soil was for legal purposes a part of it, and the property of the landlord. Contract and custom, however, sometimes gave the tenant his fixtures, and he was in time allowed by law to remove all fixtures set up for purposes of trade, then to remove buildings or machinery erected with the consent of the landlord, and later to take away engines, machinery, and some other fixtures erected without the landlord's consent. The Agricultural Holdings Act of 1883 allows him to remove engines, machinery, and other fixtures, and buildings that have not been erected instead of other buildings or in pursuance or contravention of the contract, and for which he is not entitled to compensation under the act or otherwise. In some parts of the country, in order to encourage the tenant to adopt the best methods of farming and increase the productiveness of the soil, it became customary to pay him on leaving his holding compensation for what remained of certain other kinds of improvements which he had made on or in the soil. The Agricultural Holdings Act of 1875 undertook to give him a legal right to compensation for some of these unexhausted improvements; but the provisions of the act could be avoided by notice from either landlord or tenant, and they were for that reason practically inoperative. The demand for a measure that could not be avoided in this way led Parliament to pass the Agricultural Holdings Act of 1883. This act gives the tenant on quitting his holding the right to compensation for improvements of a permanent character, such as buildings, fences, bridges, roads, orchards, permanent pastures, the reclamation of waste land, and water-works, if made with the consent of the landlord; for drainage, if made after the landlord has refused to make it; and for several other classes of improvements, mostly applications of fertilizers, whether made with or without the consent of the landlord. Compensation is fixed by agreement, arbitration, or the court, on the basis of the value of the improvements to an incoming tenant. No compensation is given for "what is justly due to the inherent capabilities of the soil," and each award must specify "the several improvements, acts, and things" for which compensation is awarded. Most of the provisions of the act can not be avoided by notice or by contract. This legislation has gone very far in the direction of completing the revolution of the old law of fixtures. The landlord's right of distress was abridged by the act, and he can now distrain for only one instead of six years' rent as formerly. The rights of the landlord have been restricted by other measures. The Ground-Game Act (1880) gives the tenant the concurrent and inalienable right to kill all the ground-game on his holding, and any contract waiving that right is incapable of enforcement at law.

There are, however, demands for additional legislation that will still further guard and increase the rights and interests of the tenant and limit those of the landlord. Among these are the abolition of the right of distress, and the giving of fuller security for labor and money invested by the tenant in improvements. That the tenant may be encouraged to adopt the best methods of farming and develop the utmost capacities of the soil, it is claimed that any work or operation, including the results of good farming, which adds to the letting value of the holding, should be included in the improvements for which he has an inalienable right to compensation, and, that the landlord may not appropriate any of the value of these improvements by arbitrarily increasing the rent, judicial rents are necessary. The Farmers' Alliances of England and Scotland have undertaken to secure for the tenant-farmers of both countries full compensation for all improvements, fixed rents, and free sales of their interests, and a bill for these purposes was introduced into Parliament at its last session. The landlords strongly object to this system of dual ownership, which would greatly restrict their rights, depreciate the value of their property, and discourage their investing more money in land or in improvements, while many statesmen oppose it on similar grounds, and because it would interfere so much with the long-recognized rights of property, and lead to numberless legal controversies on account of the difficulty of properly guarding the rights and interests of both parties. The question whether the sums of money that such a measure would prevent the landlord from investing in improvements would be more than counterbalanced by the money and labor it would lead the tenant to invest in such improvements has been much discussed.

Ireland.—In Ireland the laws relating to the ownership, transfer, and descent of land, are practically the same as the English laws, and reforms similar to those already described have been advocated. To facilitate the sale of incumbered property, the Incumbered Estates Court was established in 1848, with power to order, on the petition of the creditors, the sale of an incumbered estate, and give a simple, indefeasible title; all statutes, settlements, and covenants, to the contrary notwithstanding. It is estimated that about one fifth of the land of Ireland has been sold through the operations of this and the Landed Estates Court, to which its proceedings were transferred.

Landlord and Tenant.—The English law of landlord and tenant was somewhat modified in its application to Ireland, and, until recently, commonly in the interest of the landlord. The Irish tenant has, however, regularly claimed the right, originating in the old communal system, to the uninterrupted possession of his holding and to the value of the improvements that he and his predecessors have made. These tenants' interests were not, however, until recently secured by law, nor, except in Ulster, by any well-defined and established custom. In Ulster custom permitted the tenant on leaving his holding to sell his interests, and commonly secured him against such an increase of rent as should greatly diminish their value. In the other provinces also the tenant's interests were often openly or tacitly recognized. Their value, however, in these provinces depended largely on the generosity and forbearance of the landlord. Local custom, public opinion, and the fear of disturbance, often checked landlords who were disposed to exercise their full legal rights. The poverty of the tenant, the smallness of his holding, and the absences of industries other than farming, often increased the difficulties of his position. The Land Act of 1860 undertook to simplify the complicated relations of landlord and tenant and place them on the basis of contract. The tenants complained that its principal effect was to simplify the process by which they could be turned out, and that it was a fruitful source of rent-raising and eviction. To allay the discontent the Land Act of 1870 was passed, making the Ulster tenant-right legally binding on estates on which it had been observed, and providing that the tenant who left his holding voluntarily should have compensation for his improvements, and the tenant who was turned out, except for non-payment of rent or breach of contract, should have both compensation for his improvements and damages or compensation for disturbance. The landlord could, however, so increase the rent that the tenant, unable to pay it, would be forced to leave the holding without compensation for disturbance. Evictions commonly occurred for non-payment of rent or alleged breach of contract, and many tenants, when crops were poor and rents high, fell hopelessly in arrears, and were liable to be turned out. The poor crops of 1877, 1878, and 1879, filled the country with excitement and alarm, and the attempts of some of the landlords to evict tenants for non-payment of rent led to the Land-League war against landlords and high rents. The Land Act of 1881 is intended to provide a remedy for grievances of the tenants by allowing them to sell their interests for the best price they can get for them, establishing the Land Commission to fix a fair rent to stand for fifteen years, and securing compensation for improvements and compensation for disturbance on a more liberal scale than its predecessor. Fair rents may also be fixed by the court, or the landlord and tenant may file an agreement fixing a fair rent to stand for fifteen years. The tenant thus has fixity of tenure, fair rent, and freedom to sell his interests. No increase of rent is allowed on improvements made by the tenant or his predecessor in title unless they have been paid for by the landlord or his predecessor in title. There was much discussion in regard to the definition of improvements, and the Irish Court of Appeals, in the case of Adams *vs.* Dunseath, decided, much to the disappointment of many of the tenants, that improvements meant "improvement works," and not the increased value of the holding in consequence of the improvements. Something like a hundred thousand fair rents have been fixed by the Land Commission, and perhaps an equal number by the courts or by agreement. The new rents are on the average about 20 per cent. lower than the old ones. A slender crop and very low prices for agricultural produce in 1885 made it impossible for some and very difficult for many tenants to pay their rents, and in the latter part of the year there were new agitations and demands for from 20 to 50 per cent. reductions. When the reductions have been refused and attempts made to enforce full payment, boycotting and agrarian crimes have become common.

There has been much dissatisfaction with the exclusion of tenants of town parks and of most leaseholders from the benefits of the act, and many Irishmen and not a few Englishmen strongly advocate the extension of the provisions of the measure to these classes of tenants, who are said to number about a hundred thousand. Many of the tenants and land reformers have urged that a much more liberal interpretation ought to be given to the term improvements than the act, according to the decision of the Court of Appeals, gives. It is claimed by many that all the difference between the value of the land in an entirely unimproved condition and its present value is due solely to the labor and capital of the tenant, and that "improvements" ought to include all this difference. They would give the tenant both "what is due to the inherent capabilities of the soil" and "the unearned increment." Others, without going so far, would include good methods of farming and other specific items in "improvements."

Peasant Proprietors.—Several efforts have been made by the Government to enable Irish tenants to purchase their holdings. By the Irish Church Disestablishment Act, tenants of church-lands were given the first right to purchase their holdings, paying one fourth of the purchase-money down, and the remainder with 4 per cent. interest in half-yearly payments extending through thirty-two years. Under these provisions several thousand holdings were purchased by their occupants, who are now, as a rule, more contented and prosperous than their tenant neighbors. The purchase or Bright clauses of the Land Act of 1870 provided that the Board of Public Works might advance the tenant that purchased his holding two thirds of the purchase-money. This loan, with interest, was repayable in annual payments extending through thirty-five years. It was, however, difficult in most cases for a tenant to come to an agreement with his landlord for the sale of a single holding, to raise one third of the purchase-money at the start, and to give the board satisfactory security for the loan. Besides, the expense of looking up the titles and making surveys, maps, and transfers was often very great, amounting, in the case of small holdings, to 20 or 30 per cent. of the value of the land. These and other causes prevented the extensive operation of the act. Less than 1,000 tenants purchased under these provisions. The Land Act of 1881 provided that the Land Commission might, if satisfied with the security, advance three fourths of the purchase-money, to be repaid by an annuity of five pounds per hundred for thirty-five years. Many of the tenants were unable to raise one fourth of the purchase-money and to give satisfactory security for the loan. Most of those who were able to purchase, with security of tenure, and rents reduced and fixed, preferred to wait for the lower prices which they expected to result from further agitation, rather than pay so large a sum down, and a sum each year for thirty-five years larger than their annual rent. Very few purchased. Meantime the low prices of agricultural produce, the effects of the operations of the Land Commission in cutting down the landlords' incomes from their estates, and the prospect of further encroachments on the rights and incomes of land-owners, made land in Ireland practically unsalable, and landlords who were deeply in debt and their creditors were often put to great inconvenience. No one would venture to buy land for investment or speculation. The tenants seemed to be the only class of persons who could buy it without running great risks from future agitation and legislation, and there was a general agreement that something must be done to persuade and enable them to purchase their holdings. Accordingly, Parliament at its last session passed the Irish Land Purchase Act, providing for the loan by the Land Commission of the entire amount of purchase-money at 4 per cent., and extending the period of repayment from thirty-five to forty-nine years. To secure the Government against loss through the bankruptcy of the tenant, one fifth of the purchase-money will be retained until the tenant has paid a like sum. While only £5,000,000 have been appropriated by Parliament for loans, there is little doubt that additional sums will be set apart for that purpose if there is a demand for advances. The agreements thus far made to purchase have fixed the price at from fifteen to twenty years' purchase of the rent. At the latter rate the annual repayments and the additional taxes which the purchaser would have to pay as owner would be somewhat less than the present rent, while at the former price the difference would be very considerable.

The dual ownership established on a legal basis by the Land Act of 1881 has many objectionable features, and has commonly been regarded as a temporary expedient, to be followed by legislation that will ultimately result, as did the new legislation on the Continent, in transforming the great majority of tenants into owners of their holdings, and the general introduction of peasant proprietorship.

Laborers' Gardens.—The condition of the Irish agricultural laborers has long been wretched. To relieve them, Parliament has given the sanitary authorities power to compel land-owners to make allotments, to acquire land by agreement or compulsory purchase and build cottages, and by the Laborers' Act (1885) to compel land-owners to lease land for ninety-nine years at rents fixed by agreement, arbitration, or the court. Half-acre lots of this land may be used as sites on which the authorities may build cottages, or they may be attached to existing cottages. The Local Government Board must approve of the plans of the sanitary authorities, and in some cases an appeal lies to the Lord Lieutenant and his Council. The power conferred on the local authorities is, however, very extensive.

Scotland.—The Scottish laws and customs relating to primogeniture, entail, and settlement are in many respects similar to the English, and changes in them are advocated similar to those that are brought forward by English land-reformers. In Scotland, however, a successful system of compulsory registration has been established. The English law of landlord and tenant, with some important modifications, is also in force, and many of the recent changes in this law apply to Scotland.

The Crofters.—The condition of the small farmers of the Highlands and islands of Scotland has for many years attracted the attention of the Government, and recently great efforts have been made to have their claims recognized by law. The crofters claim a right to security of tenure, to rents fixed by a land-court, and to the use of more land for enlarging their holdings, making new holdings, and increasing the common pastures. They base these claims on certain ancient rights to the land, enjoyed by their ancestors under the old communal system, and afterward recognized more or less generally by custom. The clan organizations were abolished in 1745, and the chiefs converted into landlords and invested with the fee simple of the land. But the tenant was generally allowed to live on his holding without interruption, and the old rights of common were respected. There was sometimes, however, a disposition on the part of landlords to insist upon their full legal rights. Early in this century sheep-farming on a large scale was found to be profitable, and large areas of glen and mountain were cleared of their population and converted into sheep-farms. The crofters, compelled to give up large tracts of mountain common pasture, and their small holdings in the straths and glens lower on the mountains, were in some cases given new crofts, commonly nearer the sea, where opportunities for fishing and kelp-gathering were in a measure a compensation for the diminution of the right to common pastures; in other cases, left to themselves, they were allowed to share the already too small holdings of their more fortunate brethren, or they joined the army of cotters and squatters, or sought new homes in the cities and lowlands of the south or abroad. These "clearances" produced great indignation among the crofters, who clung tenaciously to the cottages that they or their ancestors had built, and to the holdings that their families had cultivated often for generations. Lately, sheep-farming has become much less profitable, but the interest in deer-hunting has increased, and large tracts, amounting altogether to nearly 2,000,000 acres, have been turned into deer-forests. Much of this land is unfit for agricultural purposes, although portions of it could be cultivated with advantage, and most of it would produce valuable pasture for the crofters' stock. For the past few years evictions have been much less common than formerly, but all along there has been a disposition on the part of proprietors to inclose in their sheep-farms or deer-forests lands that were formerly tilled or pastured by crofters and cotters. The poverty of some of the crofters makes their condition deplorable. The landlord has curtailed their holdings and rights of common, or they have subdivided them among their kinsmen and others, until it would not be possible for the land in some places properly to sustain the population, even if no rent were charged. The condition of the cotters and squatters is still worse. Whenever the crops are poor, suffering and hardship must result. Emigration has frequently been recommended as a remedy for this state of things, and many Highlanders have gone to other countries and proved excellent citizens everywhere. The Crofters' Commission, which reported in 1884, recommended emigration from a few overcrowded districts, and that aid be given the fishing industry for the employment of some of the surplus population. It also proposed to place restrictions on the further extension of deer-forests, and to require landlords in certain cases to grant leases at rents fixed by arbitration, and to restore lands formerly used by crofters for tillage or pasturage, and recommended the reorganization and legal recognition of the crofter township, suggesting that the occupants of existing townships have the power to acquire more land by compulsory process and at rents fixed by arbitration, and that the state advance money to improve new townships formed with the consent of the proprietors. In this way, it is urged, the crofters' claims may be secured to them, and the land, instead of being given up to sheep and deer, will be used to support men. It is argued, on the other hand, that these proposals interfere far too much with the rights of property, and that, since the crofters belong to a bygone age, even if aided in this way, they will not in their poverty, and with an unfriendly soil and climate, be able to compete with large farmers, who are in much more favorable circumstances. The landlords themselves have offered in certain cases to grant leases, to give crofters the use of more land, and to reduce rents, but these offers are unsatisfactory to the crofters, because they do not go far enough, and do not have the binding force of law. The Crofters' Bill, which was introduced into Parliament at its last session by the Liberals, and which proposed to give some of the crofters security of tenure, fixed rents, and compensation for improvements, and that the Government should advance money for stocking and improving enlarged or new holdings, was likewise unsatisfactory, because its provisions were greatly limited and restricted, and it did not provide for the compulsory enlargement of holdings and pastures. The crofters declare that no measure will be satisfactory unless it gives security of tenure and complete tenant right to all occupiers, and establishes a land-court to fix rents for all Highlanders, to enlarge the present holdings, and to form new crofting townships or separate farms wherever they are wanted, and on any suitable land.

India.—The Bengal Tenancy Act of 1883 established in Bengal a dual ownership of land, similar to that which the Irish Land Acts established in Ireland. The tenants formerly had permanent interests, amounting almost to absolute ownership, but were deprived of many of their rights, when, under the administration of Lord Cornwallis, the land was divided among the zemindars, and an effort was made to assimilate the land system to that of England. Distress and suffering resulted. In 1879 the Rent Commission proposed to restore the rights which the tenants originally had. By the Tenancy Act of 1883 the tenants were given inheritable and assignable interests; they have security of tenure, fixed rents, and freedom of sale.

United States.—The public lands of the United States are under the control and power of the General Government to grant and dispose ot as it sees fit. In recent years considerable alarm has been caused by the granting of large tracts of land, amounting altogether to more than 200,000,000 acres, to railroads, and by the acquisition of large tracts by corporations and by capitalists, who are in some cases not even citizens of the country. It is estimated that more than 100,000,000 acres of the lands granted to railroads are liable to forfeiture to the Government on account of the non-fulfillment of the conditions of the grants, and Congress has been strongly urged to declare these lands forfeited and open to settlers. Originally it was the policy of the Government to sell the lands ceded to it by the various States, to obtain money to pay the debt contracted in the War for Independence, and this policy was continued long after the debt had disappeared. Great quantities of land came into the hands of speculators, and actual settlers were placed at great disadvantage. By-and-by the various preemption laws were enacted in the interests of settlers. To give still further encouragement to those who wished to settle on the land and till it, the homestead law was enacted after a struggle which lasted twenty years. Other acts regulating the sale of desert, timber, and mineral lands have been passed. Partly by purchases legitimately made and partly by fraudulent entries made under these acts, companies and individuals have acquired large and valuable tracts of land. An act was passed by Congress at its last session to prevent the unlawful occupancy of the public lands, and requiring the removal of all inclosures heretofore unlawfully placed on them, and the investigation of all false or fictitious illegal claims. Since this act was passed, a considerable number of fraudulent entries have been canceled, and the Government has taken measures to carry out the provisions of the act. In the last presidential election campaign both political parties inserted in their platforms planks declaring that the public lands ought to be kept as homesteads for actual settlers, and ought not to be granted to railroads or other corporations, or allowed to come into the ownership of non-resident aliens. The Land Commissioner recommends the repeal of the pre-emption, timber-culture, timber-land, and desert-land acts, and of the commutation feature of the homestead act. In this way the lands might be secured for actual settlers, although nearly all the arable lands of the public domain have already been taken up.

The States have the right to grant and dispose, as they see fit, of the lands which they acquired as successors of the colonies, or by cession from the General Government, and which have not yet been appropriated to the individual ownership of citizens. The State governments in general regulate the distribution, descent, transfer, and tenure of land within their respective boundaries. The English system of land laws, which was brought over by the colonists, has been greatly modified. Primogeniture was long ago abolished in the older States, and has never been adopted in the newer; entails and settlements have been practically abolished or greatly restricted in their operations; the registration of titles and mortgages is general; and cheap and simple methods of transfer have commonly been adopted. Where land is rented, the relations of landlord and tenant are usually of the simplest character and rest chiefly on the basis of contract. There is a constant tendency to assimilate the laws of real property more and more to those which relate to personal property, and which have been derived largely from the equitable provisions of the civil law.

LITERATURE, AMERICAN, IN 1885. Fiction.— In looking over the lists of novels published in America, the first impression one receives is that American novelists are scarcely represented at all, so flooded are the lists with names of cheap reprints of English work. One of the publishers of cheap editions of foreign books justifies the practice on the same principle as that which urges the enforcement of bad laws as the best means of getting rid of them. On that basis we should conclude, from the extent to which the practice is carried, that the day of international copyright can not be very far distant. The names of leading and professional novelists naturally come first to mind. "The Rise of Silas Lapham," by William D. Howells, has, it is safe to say, been more satisfactory to his readers than any other among his later stories. He has, besides, added two more to those amusing little farces which have been so popular—"The Elevator" and "The Garroters." Dr. O. W. Holmes surprised the readers of "The New Portfolio" by sliding into a story, which was published later under the title "A Mortal Antipathy"; Bret Harte has published "Maruja" and "By Shore and Sedge"; Charles Egbert Craddock (Miss M. N. Murfree) has wisely, it seems, chosen to follow up her first successes by more work in the same field, where she is at home, and which is far from being exhausted, and has increased her reputation by "The Prophet of the Great Smoky Mountains." Her "Down the Ravine" is a shorter story, for young people.

F. Marion Crawford's "Zoroaster" seems to have attracted much less attention than his previous novels. Julian Hawthorne has published "Love, or a Name," and Henry James, "The Author of Beltraffio, and other Stories." Edgar Fawcett's "Social Silhouettes," and Dr. W. A. Hammond's "Mr. Oldmixon" and "A Strong-minded Woman" (a sequel to "Lal") may, perhaps, serve to point the frequent admonition to authors not to write too much. Sarah O. Jewett's "A Marsh Island" sustains her reputation for delicacy of touch and treatment. Blanche W. Howard and Mary A. Tincker have again taken foreign subjects in "Aulnay Tower" and "Aurora." "The Knave of Hearts," by Robert Grant, is a series of social sketches strung on a thread of story. E. W. Howe, whose "Story of a Country Town" was one of the successes of last year, follows it with "The Mystery of the Locks," and Dr. G. H. Picard, known only by "A Matter of Taste," has gained some reputation by "A Mission Flower." Admiral D. D. Porter's "Allan Dare" is finished, and is followed by "The Adventures of Harry Marline." Gen.

Adam Badeau has also entered the ranks of the novelists as the author of "Conspiracy; a Cuban Romance," some scenes of which are laid in Washington. Two collections of tales have been made from the writings of the late Edmund Quincy, "Wensley and other Stories," and "The Haunted Adjutant and other Stories."

Most noteworthy, perhaps, among all the novels of the year is William Waldorf Astor's "Valentino," which handles successfully a difficult theme, the life of Cæsar Borgia, and is satisfactory at the same time to the student of history and the lover of novels as novels. "Fiammetta" is a romance of Italy, by W. W. Story, the artist and poet. "Palermo," by Alice D. Field, is a story covering the time of Garibaldi's capture of Palermo, and including descriptions and sketches of Sicilian life and manners. Located at the other extreme of civilization is Edward King's "The Golden Spike," that is, the last one driven on the Northern Pacific Railroad—a story founded on the Villard excursion over that road in 1883. Dr. C. M. Newell, who has a field all to himself in the Sandwich Islands, gives us a Hawaiian romance, "Kaméhaméha, the Conquering King," the greater part of which is, he tells us, a truthful history of the greatest of Polynesian kings.

"The Money-Makers," published anonymously, was the greatest sensation of the year, in the way of novels, partly because it presented the obverse of the picture drawn in "The Bread-Winners," partly because its characters were supposed to be portraits of well-known individuals, but also largely because it was in itself a striking story. "Trajan," published later, is by Henry F. Keenan, to whom the authorship of "The Money-Makers" has been attributed. Mr. O. B. Bunce, well known as a writer on social topics, appeared this year as a novelist in "The Adventures of Timias Terrystone"; and Nora Perry, known by her poems, also takes a place among the novelists with her story "For a Woman." "Tarantella" is by Mathilde Blind, author of the "Life of George Eliot," in the "Famous Women Series," and "The Deacon's Week," a short story, is by Rose Terry Cooke."

"The Evolution of Dodd," by William Hanley Smith, is a novel with a purpose—to call attention to some of the mistakes in systems of popular education. "Flatland: a Romance of Many Dimensions," is an ingenious satire on the follies of society. "Troubled Waters," by Beverly E. Warner, bears on the labor question, attempting to strike the golden mean; and "An Iron Crown" is aimed at railroad monopolies. "The Bassett Claim" is a bright story, by H. R. Elliott, founded on the law's delays with regard to the "French claims." "Hyperæsthesia," by Mary Cruger, suggests a remedy for over-sensitive nerves.

Among stories by authors new in the field, or whose places are as yet not definitely indicated, the following have won a fair measure of praise: "Jan Vedder's Wife," a story of the Shetland Isles, by Amelia E. Barr, who has also published this year "The Lost Silver of Briffault" and "The Hallam Succession"; "The Last Meeting," by Brander Matthews; "Roses of Shadow," by T. R. Sullivan; "Pilot Fortune," a story of Fundy Bay, a product of the literary partnership between Marian C. L. Reeves and Emily Read; "On Both Sides," by Miss F. C. Baylor (Mrs. Belger); "Duchess Emilia," by Barrett Wendell; "A New England Conscience," by Belle C. Greene; "Within the Capes," by Howard Pyle; "The Story of a Ranch," by Alice W. Rollins; "The Old Doctor," by John Vance Cheney; "A Little Upstart," by William H. Rideing; "The Adventures of Jemmy Brown," by William L. Alden; "As it was Written," by Sidney Luska; "Upon a Cast," by Charlotte Dunning; "A Carpet Knight," by Harford Fleming; and "Patroclus and Penelope," by Theodore Ayrault Dodge.

"Across the Chasm" is a bright story, published anonymously, but attributed to Miss Julia Magruder. But one addition has been made to the "No-Name" series, "A Superior Woman." George Fleming (Miss Fletcher) is represented by "Andromeda," Mrs. A. D. T. Whitney by "Bonnyborough," and "High Lights" is attributed to her daughter. "Mrs. Herndon's Income" is by Helen Campbell, and "A Woman's Inheritance" by Amanda M. Douglas. "Color Studies," by "Ivory Black" (T. A. Janvier), includes four stories of artist-life in New York. "After Weary Years" is by Archbishop C. O'Brien, of Halifax.

High in popular favor have been E. P. Roe's "An Original Belle," and "Driven Back to Eden," a story for young people. Other stories to be mentioned are "Roslyn's Fortune," by Christian Reid (Frances C. Fisher); "Oldham," by Lucy E. Guernsey; "Without a Compass," by Frederick Van Vorst; "Bessie's Fortune," by Mary J. Holmes; "Mal Moulée," by Ella W. Wilcox; "Sweet Cicely," by Marietta Holley; "A Social Experiment," by Mrs. A. E. P. Searing; "After All," by Lilian Spencer; "Simply a Love Story," by Philip Orne; "Married too Early," by Sarah B. Willets; "Oblivion," by M. G. McClelland; "A Tangled Web," a tale of the fifteenth century, by Emily S. Holt.

The tenth volume closes the series of "Stories by American Authors." "A Treasury of Tales" is made up of one hundred stories, compiled by William Swinton.

Among translated novels are Balzac's "Père Goriot," Turgenieff's "Annals of a Sportsman," Ebers's "Serapis," Zola's "Germinal," Greville's "Mam'zelle Eugénie," Hoffmann's "Weird Tales," Erckmann-Chatrian's "The Polish Jew," Ernst Eckstein's "The Will," the Marchesa Colombi's "Wane of an Ideal," Barrili's "The Devil's Portrait"; "He Lives," by E. Oswald; "The Penniless Girl," by Heimburg; "A Sheep in Wolf's Clothing," by Debans; "Raymond's Atonement," by Ernst Werner; "The Lady of the Rubies," by E. Marlitt; "The Count of Talavera," by Van Lennep; "Red-Letter Stories," from the German of Johanna Spyri; and "Anna, the Professor's Daughter," from the Dutch of Marie Daal. "A Captive of Love" is an adaptation of Bakin's Japanese romance, by Edward Greey.

History.—The sixth volume of Bancroft's "History of the United States," issued this year, completes the author's final revision of his great work. His "History of the Formation of the Constitution of the United States" has also been republished, in one volume, with an appendix containing the Constitution and amendments. Hubert H. Bancroft has added three volumes to his "History of the Pacific Coast"—vol. ii of "The Northwest Coast," and vols. iv and v of "Mexico." J. B. McMaster has finished the second volume of his "History of the People of the United States." T. W. Higginson has collected his papers on American historical subjects into "A Larger History of the United States," which comes as far down as Jackson's administration. J. A. Schouler's "History of the United States under the Constitution" has reached its third volume. The first volume has appeared of "A Narrative and Critical History of America," to be edited by Justin Winsor, and to be completed in eight volumes. A short United States history, designed for a text-book, and admirable for ready reference, has been prepared by Prof. Alexander Johnston.

"The Huguenot Emigration to America," by C. W. Baird, is a work of great and apparently careful research in a new field. "An Inglorious Columbus," by Edward P. Vining, presents the evidence tending to show that Hwui Shân and a party of Buddhist monks from Afghanistan discovered America in the fifth century, crossing the Pacific just south of the Aleutian Isles, and passing southward along the coast to Mexico. In connection with this may be mentioned a translation from the Chinese of Hiuen Tsiang, of the "Buddhist Records of the Western World."

Of books relating to the civil war, besides those mentioned under the head of Biography, are "Incidents of the Civil War," by Admiral D. D. Porter; "Narrative of Military Service," by Gen. W. B. Hazen; "History of the Forty-eighth Regiment, New York Volunteers, 1861–'65," by A. J. Palmer, D. D.; "New York and the Conscription of 1863," by Gen. J. B. Fry; "Where Men only Dare to Go," the story of a company in the Confederate army composed mostly of boys under military age, and "In Camp and Battle with the Washington Artillery of New Orleans," by W. M. Owen; and, most important of all, the first volume of Gen. Grant's memoirs, noticed under Biography, as are also some other memoirs of soldiers.

A large number of State and local histories, and monographs on special subjects, appear among this year's publications. Four volumes have been added to the series of "American Commonwealths"—"Michigan," by Judge T. M. Cooley; "Kansas," by Prof. Leverett W. Spring; "California," by Dr. Josiah Royce; and "Tennessee," by Dr. James Phelan. Among other State and local histories are "The History of Louisiana," by C. Gayarré; the third volume of the "Documentary History of Maine," edited by J. P. Baxter; "History of Detroit and Michigan," by S. Farmer; "Local History of Virginia," by E. Ingle; "Deutsch-Pennsylvanische Geschichte," by O. Seidensticker; "Concord in the Colonial Period," by C. H. Walcott; "Memorial History of Hartford County, Conn.," edited by Dr. J. H. Trumbull; "The Baptismal Register of Fort Duquesne, from June, 1754, to December, 1756," by Rev. A. A. Lambing; "Historical Collections relating to Gwynedd, Montgomery County, Pa.," edited by H. M. Jenkins; "Old St. Augustine: a Story of Three Centuries"; "The Trumbull Papers," from the Massachusetts Historical Society; "History of the Ojibways," from the Minnesota Historical Society; "The Influence of the Proprietors in founding the State of New Jersey," a lecture by Austin Scott; "Curiosities in American History: the Green Mountain Boys, or Vermont and New York Land-Jobbers," by P. H. Smith; "Footprints; or, Incidents in the Early History of New Brunswick" (the city of), by J. W. Lawrence; "History of Albany," by A. J. Weise; "History of Chicago," by A. T. Andreas; and "The Old South Church, Boston: Memorial Addresses." A publication from the papers of the late O. H. Marshall gives interesting information concerning the aboriginal and pioneer history of western New York.

The American Historical Association is a new society, which proposes to publish from time to time original contributions to history in the form of serial monographs, which will afterward be made up into volumes. The first publications issued are a report of the organization and proceedings, by the secretary, Prof. Herbert B. Adams; "Studies in General History and the History of Civilization," by the President, Andrew D. White; and "History and Management of Land-Grants in the Northwest Territory," by Prof. G. W. Knight. Prof. H. B. Adams has also published "Maryland's Influence upon Land Cessions to the United States, with Minor Papers on George Washington's Interest in Western Lands, the Potomac Company, and a National University." Other special studies in this department are "Mining Camps," by Charles H. Shinn, an important contribution to the history of American frontier government; "The Monroe Doctrine," by George F. Tucker; "History of the Surplus Revenue of 1837," by E. G. Bourne; "Railroad Transportation: its History and its Laws," by Arthur T. Hawley; "American Constitutions," by H. Davis; "The Panama Canal: its History, Political Aspects, and Financial Difficulties," by J. C. Rodriguez; "History of the University of Michigan," by Elizabeth M. Farrand; and "History of the Boston Latin School," by Rev. Phillips Brooks.

A new series, "Stories of Nations," begins with "The Story of Greece," by Prof. J. A. Harrison, followed by "The Story of Rome," by Arthur Gilman. These are intended to be brief histories, giving prominence to the picturesque and story element, and specially designed for young people. George M. Towle contributes to the understanding of the complications in the East, "England and Egypt," and "England and Russia in Asia," and Edmund Noble "The Russian Revolt." "Italy, 1815–1878," by J. W. Probyn, covers an interesting and not very well recorded period. "The Peace of Utrecht," by J. W. Gerard, is an "Historical Review of the Great Treaty of 1713–'14, and the Principal Events in the War of the Spanish Succession." A translation of Rambaud's "History of Russia," with a continuation by N. H. Dole, supplies the want of a good history of that country. J. Savage has published "'98 and '48: Modern Revelations in the History and Literature of Ireland," and J. Gillow the first volume of a "History of English Catholics." On the border-land between history and travel is "Afghanistan and the Anglo-Russian Dispute," by T. F. Rodenbough.

"Greece in the Times of Homer," by T. T. Timayenis, gives a picture of the life, customs, and habits of the ancient Greeks; Dr. John Lord publishes his lectures under the title "Beacon Lights of History"; J. M. Ludlow, D. D., has prepared a "Concentric Chart of History" for reference; and Mrs. M. R. Gardner, "English History in Rhyme."

In biblical history we have "The Terrible Catastrophe or Biblical Deluge, illustrated and corroborated by Mythology, Tradition, and Geology," by Rev. G. C. Hasskarl; "Buried Cities Recovered," by F. S. De Haas, D. D.; and "Coins of the Bible." Histories of churches will be found under the head of Religion.

Other books that may be mentioned here are "An Illustrated History of United States and Colonial Coins," by C. Steigerwalt, "The Colonial Jetons of Louis XV," and the 4th volume of Von Holst's "United States."

Biography.—The first place under this head is due to the "Personal Memoirs of Gen. U. S. Grant," the first volume of which was issued Dec. 1, and reached a sale of over 300,000 copies. Several short biographies of Gen. Grant have been published during the year. Other lives of soldiers of the civil war are: "The Life and Times of Gen. Emory Upton," by Prof. Peter S. Michie, and "The Life and Campaigns of the Confederate General J. E. B. Stuart," by H. B. McClellan, who was an officer on his staff. George Ticknor Curtis has published a pamphlet, "McClellan's Last Service to the Republic, together with a Tribute to his Memory." Other biographies of actors of the war period and that just preceding are F. B. Sanborn's "Life and Letters of John Brown," and the "Life of William Lloyd Garrison," by his sons.

"The Life and Times of Samuel Bowles," of the Springfield "Republican," by G. S. Merriam, is one of the most noteworthy of recent biographies. Two of the most interesting are "Agassiz," by Mrs. E. C. Agassiz, and "Boots and Saddles," a sketch of Gen. George A. Custer, by Mrs. E. B. Custer. "Colonial New York—Philip Schuyler and his Family," is by G. W. Schuyler. An admirable political and military "History of Napoleon" is furnished from a course of lectures before the Lowell Institute, by John C. Ropes.

"Samuel Adams," by James K. Hosmer, and "John Marshall," by Allan B. Magruder, have been added to the "American Statesman" series, and "Nathaniel Parker Willis," by Henry A. Beers, and "Edgar Allan Poe," by G. E. Woodberry, to the series "American Men of Letters." To the "Famous Women" series but one volume has been added, "Harriet Martineau," by Mrs. F. Fenwick Miller. "The Life and Letters of Thomas Gold Appleton," edited by Susan Hale, is one of the best biographies of the year. Grace A. Oliver has written a very satisfactory biography of "Arthur Penrhyn Stanley." From papers furnished by the author's family, Blanche Roosevelt (Macchetta) has prepared the "Life and Reminiscences of Gustave Doré." Dr. E. E. Beardsley has written of William Samuel Johnson, LL. D., first U. S. Senator of Connecticut and a President of Columbia College. J. E. Sibley has published "Biographical Sketches of Harvard Graduates from 1678 to 1689," and F. B. Dexter has done a like office for Yale, 1701 to 1745.

Of biographies of musicians, J. A. F. Maitland is the author of "Schumann," and Pauline D. Townsend of "Joseph Haydn." President Noah Porter has published his sketch of Bishop "Berkeley," and Dr. William M. Taylor one of "John Knox." J. W. Wilstach has written of "Montalembert," Mrs. A. Wittenmyer of the "Women of the Reformation." Frances Hayes has sketched the "Women of the Day," and Mrs. Ellen M. O'Connor has written the life of "Myrtilla Miner," who opened the first school for colored children in the District of Columbia.

Other biographies and memorials are "Joseph Henry and the Magnetic Telegraph," by E. N. Dickerson; "Rev. Warren H. Cudworth," by his sister; "Jerry McAuley," by Rev. R. M. Offord; "Life of Levi Scott," a bishop of the M. E. Church, by Dr. D. P. Kidder; and one of "Edward Thomson," another bishop in the same church, by his son; "Mrs. L. B. Coan," by Titus Coan; "Rev. John G. Landrum," by H. P. Griffith; "William E. Burton," by W. L. Keese; and a "Life of Sidney Lanier," by

William H. Ward, prefixed to an edition of his collected poems.

In autobiographies we have that of Andrew J. Davis and "Platform Echoes," by John B. Gough. In reminiscences of authors, "Bryant and his Friends," by J. G. Wilson, and "Personal Traits of British Authors," edited by Edward T. Mason.

The principal translations in this department are Davilliers's "Life of Fortuny," Bourrienne's "Life of Napoleon Bonaparte," Bacourt's "Souvenirs of a Diplomat," and the "Memoirs of Karoline Bauer."

Poetry.—A few good books of poems are as usual scattered among a great many that are indifferent or trashy. Little has been published by well-known poets. "Lyrics and other Poems," by Richard Watson Gilder; "Poems," by William D. Howells; and "Poems," by W. W. Story, are in part made up of new material. Mrs. Julia C. R. Dorr has published "Afternoon Songs," and Helen G. Cone "Oberon and Puck." "A New-Year's Masque," by Edith Thomas, has received the praise of the critics. Other noteworthy volumes of verse are: "An Irish Garland," by Sarah M. B. Piatt; "Agamemnon's Daughter," by Denton G. Snider; "The Thankless Muse," by Henry A. Beers; "Songs of the Silent World," by Elizabeth S. Phelps; "City Ballads," by Will Carleton; "Hidden Sweetness," by Mary Bradley; "Pictures in Song," by Clinton Scollard; "The Gray Masque," by Mary B. Dodge; "Verses," by A. D. F. Randolph; and "The New King Arthur," by the author of "The Buntling Ball." A complete collection of the poems of Sidney Lanier has been made, and prefaced with a sketch of his life. J. J. and S. M. B. Piatt have sent out a pretty volume of verse for the young people, "Children Out of Doors." Other volumes of verse that have appeared during the year are: "Poems, Original and Translated," by Charles T. Brooks; "Camp-Fire and other Poems," by Kate Sherwood; "Lays of a Bohemian," by S. R. Sherwood; "Elijah the Reformer and other Poems," by G. L. Taylor, D. D.; "Verses of a Collegian," by E. Gerstle; "Hero and Leander," by C. R. Zache; "Sir Cupid and other Poems," by E. Y. Cohen; "Songs of All Seasons," by J. B. Kenyon; "Home Blossoms," by E. A. Woodbury; "Rural Lyrics," by J. F. Simmons; "Wind and Whirlwind," by J. S. Blunt; "Fragments from an Old Inn," by Lillian R. Messenger; "Poems on Lake Winnipesaukee," by Julia N. Stickney; "Cromwell," by G. A. Townsend; "The Procession of the Zodiac," by Margaret Johnson; "Stray Thoughts," by Maria H. Parker; "A Story of Psyche," by M. E. Blanchard; "Lilith," by Ada L. Collier; "Rustic Rhymes," by Mrs. E. T. Corbett; "Annabel and other Poems," by E. P. Allerton; "Up to the Light," by Sara H. Smith; "Rhymes," by D. Robertson; "A Feather from the World's Wing," by A. S. Logan; "Ashes for Flame," by Mrs. C. D. Howe; "Wishmaker's Town," by W. Young; "Washington," by R. H. Ball; "Montezuma," by H. H. Richmond; and "The Inca Princess," by Mrs. M. B. M. Toland.

Ednah D. Cheney has compiled a book of translations of Michel Angelo's poems, and Léonce Rabillon has translated "Le Chanson de Roland." Karl Knortz has edited a collection, "Representative German Poems," giving the originals and selected translations. "A Library of Religious Poetry" is edited by Dr. Philip Schaff and Arthur Gilman, and "The Boy's Book of Ballads" by T. D. English.

Criticism and General Literature.—In critical work we find comparatively little. Richard Grant White was engaged in revising various magazine papers on Shakespeare when he was stricken with his last illness, and these have been collected under the title "Studies in Shakespeare." Other books of more or less value in Shakespearean study are: "Ecclesiastical Law in Hamlet," by R. S. Guernsey, arguing a minute acquaintance in Shakespeare with the laws of the Church regarding suicides, from the scene of the burial of Ophelia; "Venus and Adonis," by Appleton Morgan, a study in the Warwickshire dialect; "Shakespeare as a Dramatic Artist," by R. G. Moulton; "A Concordance to Shakespeare," by W. H. D. Adams, a concordance of phrases by their chief words; and "What we really know about Shakespeare," by Caroline H. Dall.

George Eliot ranks next as a subject for criticism. Miss Rose E. Cleveland's "George Eliot's Poetry and other Essays" has had a very large sale. Rev. C. G. Ames has written of "George Eliot's Two Marriages," and furnished an introduction to J. Crombie Brown's "Ethics of George Eliot's Works."

"The Genius and Character of Emerson" is made up of the essays and poems read at the Concord School of Philosophy in the special course of 1884, devoted to the study of Emerson.

Edmund C. Stedman's "Poets of America" is one of the most elaborate books of its kind in existence; it is a companion volume to his "Victorian Poets," published in 1875. Prof. Francis Bowen has written of the Bible as a book for study, aside from religious considerations, in "A Layman's Study of the English Bible, considered in its Literary and Secular Aspects." Rev. William C. Wilkinson displays a capacity for minute criticism in his "Edwin Arnold as Poetizer and as Paganizer." G. P. Upton writes of "The Standard Operas," and William Winter of "Henry Irving." "The Enchiridion of Criticism," by W. Shepard, professes to give the best criticisms on the best authors in the department of *belles-lettres.*

Miss Louise Imogen Guiney has published a book of bright essays with the title "Goose-quill Papers"; Frederick Saunders, author of "Salad for the Solitary," a collection entitled "Pastime Papers"; and Miss Kate Sanborn "The Wit of Women," and "Vanity and Insanity of Genius."

Some valuable additions have been made to our stock of folk-lore. "Gombo Zhèbes" is a dictionary of Creole proverbs compiled by Lafcadio Hearn. D. G. Brinton has collected the "Legends of the Lenapé" and translated a "Grammar of the Cakchiquel Language." "The Lenapé Stone," by H. C. Mercer, describes a stone bearing curious Indian designs, the genuineness of which has, however, been disputed. T. F. Crane has made a translation of "Italian Popular Tales," and Fletcher S. Bassett has collected "Legends and Superstitions of the Sea and of Sailors."

An edition of the collected works of Alexander Hamilton has been begun by the publication of one volume. Those of George P. Marsh are in process of publication. The "Essays and Speeches" of Judge J. S. Black are prefaced with a biographical sketch by his son, Chauncey F. Black; and "The Literary Remains of Henry James" are edited by his son.

In books of literary reference, "Initials and Pseudonyms, a Dictionary of Literary Disguises," by Rev. William Cushing, with which was incorporated the material collected by Albert R. Frey for a similar work, gives about 12,000 of these pen-names, and names of about 7,000 authors who have used them. "A Concise Poetical Concordance to the Principal Poets of the World," by C. A. Durfee, embraces titles, first lines, characters, subjects, and quotations. Miss M. G. Phillips has prepared a "Manual of English Literature," which meets with approval. "Echoes of Many Voices," by Eliza A. Thurston, is a general collection of extracts without any prevailing subject or tone.

Travel.—Of books of travel in the extreme north we have had this year, "Farthest North," by C. Lanman, giving the life and explorations of Lieut. James B. Lockwood, of the Greely Arctic Expedition, who reached the most northerly point yet attained by any one, and "The Rescue of Greely," by Commander W. S. Schley and Prof. J. R. Soley, giving accounts of the original undertaking and of the relief expeditions. Lieut. F. Schwatka has detailed his adventures in "Nimrod in the North" and "Along Alaska's Great River," details of a journey of over 1,300 miles up the Yukon. Miss E. R. Scidmore's newspaper letters have been collected under the title "Alaska: Its Southern Coast and the Sitkan Archipelago." Sophus Tromholt's "Under the Rays of the Aurora Borealis" is edited and published by C. Siewers. "In the Lena Delta," the record of a search for Commander De Long, is by George W. Melville.

Winfrid A. Stearns is the author of "Labrador: A Sketch of its Peoples, its Industries, and its Natural History"; and Canniff Haight of "Country Life in Canada." William H. Bishop describes "Fish and Men in the Maine Islands," and J. S. Webber "In and around Cape Ann." Francis Parkman's "Hand-Book of a Northern Tour" is, of course, a guide-book and something more. "Here and there in our own Country" is a volume made up of sketches of travel and descriptions of places by various writers—Edmund Kirke, W. H. Rideing, Amelia E. Barr, Alfred T. Bacon, Louise S. Houghton, and others.

The far West is described in several books which may be classed as travels—Ernest Ingersoll's "The Crest of the Continent," J. A. Tait's "Cattle-Fields of the Far West," Roosevelt's "Life on a Cattle Ranch"; "With the Invader: Glimpses of the Southwest," by Edwards Roberts; "Cattle-Raising on the Plains of New Mexico," by Walter Baron von Richthofen; and "Prairie Experience in Raising Cattle and Sheep," by W. Shepherd.

Cuba is described in J. W. Steele's "Cuban Sketches," M. M. Ballou's "Due South," and W. Drysdale's "In Sunny Lands," a collection of his newspaper letters from Nassau and Cuba.

J. T. Headley's account of "The Darien Exploring Expedition," under command of Lieut. Strain, has been reprinted from the magazine in which it first appeared.

Books of European travel, good and bad, abound as usual. Among them are: "Tuscan Cities," by William D. Howells; "Literary Landmarks of London," by Laurence Hutton; "A Canterbury Pilgrimage," the text by Mrs. E. R. Pennell, the illustrations by Mr. Pennell; and "The Greek Islands and Turkey after the War," by Henry M. Field, D.D. Rev. R. L. Collier writes of "English Home Life," and Miss Mary L. Ninde in "We Two Alone in Europe" describes the wanderings of two young ladies aside from the regular lines of travel. "Waymarks," by Josephine Tyler, gives the experiences of another lady in Europe. "A Summer in Scandinavia" is by Mrs. Mary A. Stone, and "Norwegian Pictures" by R. Lovett. "Sunny Spain" is by Olive Patch, and "Through Spain" by S. P. Scott.

Rev. Dr. W. P. Breed publishes "Aboard and Abroad in 1884"; H. F. Reddall, "From the Golden Gate to the Golden Horn"; W. H. Cord, "A Knight Templar Abroad"; and Eliza A. Slade, "Pilgrims and Shrines."

The most noteworthy book of the year on Africa is Henry M. Stanley's "The Congo and the Founding of its Free State." Joseph Thomson's "Through Masai Land," an account of his experiences with a warlike tribe in eastern Africa, has appeared in this country. W. M. F. Petrie has described "The Pyramids and Temples of Ghizeh," and G. A. Shaw has written of "Madagascar and France." "Chosön, the Land of the Morning Calm," is a sketch of Corea, by Percival Lowell.

The last volume of "The Land and the Book," by William M. Thomson, D. D., takes up descriptions of Lebanon, Damascus, Beyrout, and the Jordan. D. Van Horne has written of "Tent and Saddle Life in the Holy Land," H. Lansdell of "Russian Central Asia," W. Elliot Griffis of "Corea Without and Within." We have narratives of missionary travel in "The Cross and the Dragon," by B. C. Henry, and "From Boston to Bareilly and Back," by Rev. W. Butler, D. D. "The Cruise of the Brooklyn," by Lieut. W. H. Beehler, describes a three years' voyage in the South Atlantic and Indian Oceans. In "Two Years in the Jungle," William T. Hornaday gives the experiences of a hunter and naturalist in India, Ceylon, the Malay Peninsula, and Borneo. "The King Country; or, Explorations in New Zealand," is a narrative of six hundred miles of travel through Maorland, by J. H. Kerry Nichols.

Several books on travel in India, Thibet, and among the Himalayas, by British authors, have been published or reprinted in this country during the year. "Life and Travel in India," by Anna H. Leonowens; "In the Himalayas and on Indian Plains," by C. F. G. Cumming; "The Abode of Snow: Observations on a Tour from Chinese Thibet to the Indian Caucasus through the Upper Valleys of the Himalaya," by Andrew Wilson; "The Queen's Empire; or, Ind and Her Pearl," by Joseph Moore; and "Amongst the Shans," by Archibald R. Colquhoun.

Philosophy and Mental Science.—In addition to some books mentioned under the head of religion, and treating of philosophical subjects as connected with religious questions, we have in this department a critical exposition of "Hegel's Æsthetics," an important work by Prof. J. Steinfort Kedney, and "The Religious Aspect of Philosophy: A Critique of the Bases of Conduct and of Faith," by Dr. Josiah Royce, of Harvard. Prof. John Fiske, carrying on the line of thought begun in his "Destiny of Man," has written "The Idea of God as affected by Modern Knowledge." W. A. Hovey has given us a curious book on the borderland of science, "Mind-Reading and Beyond." "The Philosophy of Disenchantment," by Edgar E. Saltus, is a study of pessimism. Others are: "The Dæmon of Darwin," by Prof. Elliott Coues—the principles of evolution applied to the development and destiny of the soul; "Problems in Philosophy," by Prof. John Bascom; "Scientific Theism," by F. E. Abbott; "The Nature of Mind and Human Automatism," by Dr. Morton Prince; and "The Blot on the Brain," studies in History and Psychology, by W. W. Ireland, M. D. Mr. F. May Holland has written a history of "The Rise of Intellectual Liberty," and a translation of Lotze's "Microcosmos," as well as of his "Philosophy of Religion," mentioned in another place, has been made.

Political Economy, Politics.—In the vexed domain of economics the year has seen added to the mass of discussion two books by Prof. W. G. Sumner, "Collected Essays on Political and Social Science," and "Protectionism: the Ism which teaches that Waste makes Wealth . . . a Social Abuse, an Economic Blunder, and a Political Evil." In text-books and manuals are: "Practical Economics," by D. A. Wells; "The Premises of Political Economy," by Simon N. Patten; "Principles of Political Economy," by Simon Newcomb, and "Outline Study of Political Economy," by G. M. Steele. Edward Atkinson has written of "The Distribution of Products." "Man's Birthright," by E. H. G. Clark, aims to give a practical solution to the question of ownership in land, taking into account both natural rights and individual claims. The relations of labor and capital are directly discussed in "Bread-Winners Abroad" (in Great Britain), by R. P. Porter; "Arbitration between Capital and Labor," by D. J. Ryan; "The Industrial Situation and the Question of Wages," by J. Schoenhof, and "The Way Out," by C. J. Bellamy.

Prof. F. W. Taussig has written a "History of the Present Tariff, 1860-1883." John Fiske has published his three lectures before the Royal Institution of Great Britain under the title "American Political Ideas viewed from the Standpoint of Universal History." J. Laurence Laughlin has written a "History of Bimetallism"; A. T. Hadley, "Railroad Transportation: Its History and its Laws"; G. A. Lawton, of "The American Caucus System"; John M. Comstock, of "The Civil Service in the United States"; Woodrow Wilson, of "Congressional Government"; Albert Stickney, of "Democratic Government"; Hon. C. A. Washburn, of "Political Evolution"; and Prof. Philemon Bliss, "Of Sovereignty" in its bearing on the State, the right of secession, etc. A. M. Gibson, under the title "A Political Crime," has revived the question of the presidential election of 1876. "The Fall of the Great Republic" was an attempt to set present political tendencies, in the light of their possible consequences, in a history of the future after the fall of the republic, and the placing of the country under the protection of Great Britain. George W. Cable has published in a book his three papers on the political situation in the South—"The Silent South," "The Freedman's Case in Equity," and "The Convict Lease System." We may place here an anonymous book which attracted great attention, "The Man of Destiny," by "Siva"—letters to a President-elect, remarkable for their clear, cutting style, no less than for their unsparing use of facts and inferences.

Religion and Theology.—Most noteworthy, perhaps, of books on biblical subjects, though belonging rather under the head of scientific discussion, is "Paradise Found," by Dr. William F. Warren, President of Boston University. The idea that the Arctic region was the first to become habitable by the gradual cooling of the earth's surface, has been made somewhat familiar by Mr. Scribner's monograph, "Where did Life Begin?" and Dr. Warren has brought to bear on the subject a great amount of research among the mythologies and literatures of ancient peoples.

The publication in book-form in this country of the discussion between Frederic Harrison and Herbert Spencer on "The Nature and Reality of Religion," and its subsequent withdrawal on account of Mr. Harrison's objections, caused something of a sensation. The translated work of the Russian Count Leo Tolstoi, "My Religion," has attracted a great deal of notice. It seems a singular commentary on the Christianity of Christians, that a book described as "a plea for the direct application of the teachings of Jesus to the affairs of life" should be so fresh and original in its central idea as to be startling, but this appears to be the case.

In critical study, we have "The Pentateuch; its Origin and Structure: an Examination of Recent Theories," by Rev. Dr. E. C. Bissell; "The Hebrew Feasts in their Relation to Recent Critical Hypotheses concerning the Pentateuch," by Dr. W. A. Green; "Christ and Christianity: Studies in Christology, Creeds, and Confessions, Protestantism and Romanism, the Reformation," etc., by Rev. Dr. Philip Schaff, who has also published an explanation of "The Oldest Church Manual, the 'Teaching of the Twelve Apostles,'" by comparison and illustration from other early teachings. Prof. Francis Bowen has written of "Assyriology: its Use and Abuse," pointing out the advantages and dangers of the study to Old Testament students. In "The Blood Covenant," Dr. H. C. Trumbull examines a practice of great interest in connection with Scripture, and not heretofore noted—the primitive rite of covenanting by the intertransfusion of blood. A new translation of the Book of Esther by the Lowell Hebrew Club is one of the notable events of the year in this department; and in Scripture interpretation, "The Revelation of St. John the Divine, self-interpreted," by Dr. Samuel Fuller. "Ecclesiology," by Prof. E. D. Morris, is a "Treatise on the Church and the Kingdom of God on Earth."

Books on evidences of Christianity are: "A Primer of Christian Evidence," by R. A. Bedford; "Reasons for Faith in the Nineteenth Century," by J. M. Leavitt, and "Why we believe the Bible: an Hour's Reading for Busy People," by J. P. T. Ingraham. Among books dealing with speculative questions in religion are, the translation of Hermann Lotze's "Philosophy of Religion," by Prof. Ladd, of Yale; "The Religion of Philosophy; or, the Unification of Knowledge: a Comparison of the Chief Philosophical and Religious Systems of the World," by Raymond S. Perrin; "Natural Theology or Rational Theism," by M. Valentine, D. D.; "Evolution Christianity," by Dr. Benjamin F. Tefft, and "Outlines of the Future Religion of the World," by T. Lloyd Stanley. In reference to doctrines, controverted questions, and the like, may be mentioned: "The Doctrine of Original Sin as Received and Taught by Churches of the Reformation," by R. W. Landis; "The Keys of the Kingdom," by Rev. J. J. Moriarty; "Dogma no Antidote for Doubt," by a member of the New York Bar; "Revelation, Universal and Special," by Rev. W. W. Olssen, and "Current Discussions in Theology," by professors in the Chicago Theological Seminary.

Several important works in church history and the histories of churches have been issued—the fourth volume, "Mediæval Christianity," of Dr. Schaff's "History of the Christian Church"; "Church History in Brief," by J. C. Moffatt, D. D.; "History of Christian Doctrine," by H. C. Sheldon; "History of the American Episcopal Church," edited by Rev. Dr. W. S. Perry; "A Short History of the Episcopal Church in America," by Rev. W. Benham; "American Presbyterianism: Its Origin and Early Growth," by Rev. Dr. C. A. Briggs; to which may be added "The Days of Makemie," a pioneer of the Presbyterian Church in Maryland, by E. P. Bowen, D. D.; "History of the Church known as Unitas Fratrum" (Moravians), by Edmund de Schweinitz, in connection with which may be placed a very interesting chapter of the history of the Moravian Church in America, "The Diary of David Zeisberger, Moravian Missionary among the Indians of Ohio, 1781-'98," translated from the original manuscript by E. F. Bliss. Other church histories are: "Universalism in America," by Richard Eddy, D. D.; "A History of the Catholic Church in Kentucky," by B. J. Webb; and "A Brief History of Mormonism," by Mrs. E. E. Dickinson, a kinswoman of Solomon Spalding, from whose stolen manuscript, it is said, the Book of Mormon was made.

Among the many devotional books and volumes of sermons may be mentioned "Sermons in Songs," by Rev. Dr. C. S. Robinson; "The Religious Life," by Rev. M. J. Savage; "Bible Characters," by the late Alexander G. Mercer, D. D.; "Philistinism," by Rev. R. Heber Newton; "Summer Sermons," by Rev. W. W. Newton; "Divine Sovereignty and other Sermons," by Rev. Reneu Thomas; "Evolution and Religion," by Rev. H. W. Beecher; "Lectures on the Epistles for Sundays and Chief Festivals," by J. A. Seiss, D. D.; "The Heavenly Vision and other Sermons," by H. M. Booth, D. D.; "Good-Friday," by Rev. H. S. Holland; "Atheism and Arithmetic," by H. L. Hastings; "The Woman Friends of Jesus," by Dr. H. C. McCook; "Sunrise on the Soul," by Hugh S. Carpenter; "In His Steps," by J. B. Miller; "The Coming of the Lord," by J. C. Rankin, D. D.; "Obscure Characters and Minor Lights of Scripture," by F. Hastings; "The Young Men and the Churches," by Rev. Washington Gladden; "Following Christ," by J. B. Stratton, D. D.; "Nature in Scripture," by Rev. E. E. Cummings; "Metaphors in the Gospels," by Donald Fraser, D. D.; "The Possibilities of Grace," by Rev. Asbury Lowrey; "Light on the Pilgrim's Way," from the writings of the late Rev. C. A. Stork, D. D.; "The Sabbath," by Rev. Dr. W. W. Everts; "The Lord's Day," by A. E. Waffle; and volumes of sermons by Rev. T. D. Talmage, Rev. W. Benham, Rev. Dr. C. F. Deems, Rev. Dr. J. De Witt, Rev. Phillips Brooks, the late Bishop Simpson, Rev. Dr. A. P. Peabody, Rev. Dr. Edwards A. Park, Rev. W. I. Potter, and W. C. Magee, D. D.

A volume made up of selections from the writings of Theodore Parker is entitled "Views of Religion." The works of Bishop J. England, of Charleston, are collected and published. Two sermons by Rev. Dr. C. A. Bartol are entitled "Spiritual Specifics: Mind and Medicine," and on similar topics Rev. W. F. Evans has "The Primitive Mind-Cure: the Nature and Power of Faith," and Sarah E. Titcomb, "Mind-Cure on a Material Basis." Revere F. Weidner has prepared a "Theological Encyclopædia and Methodology," and Rev. W. F. Shaw, "The Preacher's Promptuary of Anecdote." The principles of Buddhism are explained in H. S. Olcutt's "Buddhist Catechism," and W. W. Rockhill has translated "The Life of Buddha and the Early History of his Order." The "Pulpit Commentary" is edited by Rev. H. D. M. Spencer and Rev. J. S. Exell.

Science.—Additions have been made to the "International Scientific Series" of "The Origin of Cultivated Plants," by Alphonse de Candolle; "Jelly-Fish, Star-Fish, and Sea-Urchins, a Research in Primitive Nervous Systems," by G. J. Romanes; "The Common Sense of the Exact Sciences," by W. K. Clifford; and "Anthropoid Apes," by Robert Hartmann. Additions to the literature of plants are "The Woods of the United States," by C. S. Sargent, a descriptive catalogue to the Jessup collection of American woods in the American Museum of Natural History, with an appendix of tables giving the physical properties of the various woods; "Chapters on Plant Life," by Sophie B. Herrick; "Talks Afield," by L. H. Bailey, Jr.; and a translation of J. W. Behrens's "The Microscope in Botany," and "The Peanut Plant: its Cultivation and Uses."

Studies of animal life are given us by W. H. Beard in his "Humor in Animals," described by pen and pencil; Olive Thorne Miller in "Bird-Ways," Bradford Torrey in "Birds in the Bush," Mary Treat in "Home Studies of Nature," chiefly of birds, and C. F. Holder in "Marvels of Animal Life," mostly a study of fishes.

In chemistry may be mentioned "Lectnre Notes on General Chemistry," by J. T. Harris; "Inorganic Chemistry," by E. Frankland and F. R. Japp; "Chemical Tests," a list of 870, alphabetically arranged for practical use, by H. M. Wilder; and a translation of Stammer's "Chemical Problems," and "Notes on the Chemistry of Iron," by Magnus Troilius.

C. L. Doolittle has prepared "Practical Astronomy, as applied to Geodesy and Navigation." "Celestial Empires," by E. F. Burr, D.D., is an astronomical study with a religious aim. Royal Hill has prepared "The Stars and Constellations," a new practical method for locating the fixed stars without instruments, globes, or maps. "Geonomy," by J. Stanley Grimes, is a theory of the "creation of continents by ocean-currents—an advanced system of physical geology and geography." "Town Geology," by Angelo Heilprin, is on the rock-formations about Philadelphia.

Other books of practical or speculative science are: "Bacteria Investigation," by Dr. C. S. Dolley; "Talks about the Weather in Relation to Plants and Animals"; "Moisture and Dryness in the United States," by C. Denison; "The Doctrine of the Circulation," by J. C. Dalton, M. D.; "The World's Lumber-Room," by Selina Gaye; "A Popular Exposition of Electricity," by Rev. M. S. Brennan; a translation of H. Frey's "Microscope and Microscopical Technology"; "A Text-Book of the Materials of Construction, for Use in Technical Schools," by R. H. Thurston; "Animal Food Resources of Different Nations," by P. L. Simmons; and "Women, Plumbers, and Doctors; or, Household Sanitation," by Mrs. H. M. Plunkett.

Law.—In addition to the almost numberless reports of current court decisions periodically issued in the various States and districts, progress has been made in the series of publications of older reports by added volumes, the "American Decisions," "Federal Decisions," etc. The fourth volume completes "Abbott's National Digest." "The American Law Digest and Legal Directory" is edited by W. F. Wernse.

Other books on legal subjects are: "The Laws of Mexico," by Frederic Hall; "A Treatise on Attachment and Garnishment," by Rufus Waples; "The Law of Insanity in its Application to Civil Rights and Capacities and Criminal Responsibility," by Henry F. Buswell; "The Power and Authority of School Officers and Teachers in the Management and Government of Public Schools," etc., by a member of the Massachusetts Bar; "A Treatise on the Law of Official Bonds and other Penal Bonds," by W. L. Murfree; "The Law of Presumptive Evidence," by J. D. Lawson; "Prosecution and Defense," by Joel P. Bishop, LL. D.; "American and English Corporation Cases," vol. v, by Lawrence Lewis, Jr., and J. H. Merrill; "Forms and Precedents; embracing Pleading and Practice in Courts of Equity," etc., by J. Carey, Jr., and F. K. Carey; "Jurisdiction and Proceedings in Admiralty Courts in Civil Cases," by Morton P. Henry; "Leading Cases in the Law of Real Property," by G. Sharswood and H. Budd; "How to be Your Own Lawyer," by M. T. Richardson; "Laws of New York relating to Banks," etc., with amendments and annotations, by Willis S. Paine; "The Law as to the Property Rights of Married Women as contained in the Statutes and Decisions of California, Texas, and Nevada," by H. G. Platt; "Treatise on Criminal Law," by Francis Wharton; "Treatise on the Law relating to County and Township Officers," by F. C. Hooton; "The New Mechanics' Lien Law of New York," annotated by J. S. Derby; "Parties to Mortgage Foreclosures," by Charles H. Wiltsie; "A Brief for the Trial of Civil Issues before a Jury," by Austin Abbott; "The Legal Guide," by J. H. Batten, Jr.; "The Principles of Sale," by Robert Ralston; "Equity Pleadings and Practice in the Courts of Massachusetts," by P. Emory Aldrich; "The Compiled Laws of Kansas," collated and annotated by C. F. W. Dassler; "The Ohio Farmer's Law Book," by T. K. Dissette; "Reports of Cases arising upon Applications for Letters Patent for Inventions determined in the Circuit and Supreme Courts of the District of Columbia, on appeal from the Commissioner of Patents," vol. i, by Frank McArthur; "The Adjudged Cases on Defenses to Crime," vol. iii, by J. D. Lawson; "A Treatise on the Law of Contributory Negligence," by C. F. Beach, Jr.; "Law without Lawyers," by H. B. Corey; "A Practical Handbook of the Law," by H. A. Haigh; "General Assignments for Benefit of Creditors," by J. S. Derby; "The Mining Reports: Cases in Laws of Mines," by R. S. Morrison.

Medicine.—The following works on medical subjects have been published:

"A System of Practical Medicine by American Authors," vols. i, ii, and iii, edited by Dr. William Pepper and Dr. Louis Starr; "Handbook of Pathological Anatomy and Histology, with an Introductory Section on Post-mortem Examinations," etc., by F. Delafield and Prudden T. Mitchell; "The Basic Pathology and Specific Treatment of Diphtheria, Typhoid, etc.," by G. J. Ziegler, M. D.; "Cocaine: its Use in Ophthalmic and General Surgery," by H. Knapp, M. D.; "Elements of Surgical Diagnosis," by A. Pearce Gould; "Practical Treatise on Diseases of Children," by Eustace Smith, M. D.; "Insomnia," by H. Lyman, M. D.; "Pelvic and Hernial Therapeutics," by G. A. Taylor, M. D.; "Lectures on Diseases of the Rectum," by J. Williston, M. D.; "A Treatise on Cholera," by Dr. E. C. Wendt and others; "Bodily Deformities and their Treatment," by H. A. Reeves; "The Tobacco Remedy," by T. L. Clingman; "Index to Surgery," by C. B. Keetly; "Consumption: its Nature, Causes, Prevention, and Cure," by J. M. W. Kitchen, M. D.; "On Sclerosis of the Spinal Cord," by Julius Althaus, M. D; "Dental Surgery," by W. A. Barrett, M. D.; "A Manual of Dermatology," by A. R. Robinson, M. D.; "Topographical Anatomy of the Brain," by J. C. Dalton, M. D.; "The Oleates," by S. V. Shoemaker, M. D.; "Hay Fever," by C. E. Sajous, M. D.; "Manual of the Antiseptic Treatment of Wounds," by W. Watson Cheyne; "Elements of Modern Medicine," by R. French Stone, M. D.; "Insanity and Allied Neuroses," by G. H. Savage, M. D.; "Intestinal Obstruction," by F. Treves; "On Renal and Urinary Affections," by W. H. Dickinson, M. D.; "Cancer," by Willis Parker, M. D.; "Diseases of the Kidneys," by C. H. Ralfe, M. D.; "Students' Guide to Medical Jurisprudence," by J. Abercrombie, M. D.; "Face and Foot Deformities," by F. Churchill, M. D.; "Inebriism," by T. L. Wright, M. D.; "Treatise on Epidemic Cholera and Allied Diseases," by A. B. Palmer, M. D.; "Treatise on Nervous Diseases," by S. G. Webber, M. D.; "The Modern Family Physician and Family Guide," by Drs. J. G. Richardson, W. H. Ford, and C. C. Vanderbeck; "Diseases of the Tongue," by H. T. Butlin; "Manual of the Diseases of Women," by C. H. May, M. D.; "The Mother's Manual of Children's Diseases," by C. West, M. D.; "Epitome of Diseases of the Skin," by L. A. Duhring, M. D.; "A Text-book of Ophthalmoscopy," by E. G. Loring, M. D.; "The Essentials of Histology," by E. A. Schäfer; "Manual of Operative Surgery," by L. A. Stimson, M. D. Dr. Joseph Thomas has prepared a "Complete Pronouncing Medical Dictionary."

Miscellaneous.—A few books unclassified remain to be noticed:

F. R. Halsey is the editor of "Raphael Morghen's Engravings," with a life of the engraver. "The Philosophy of Art in America," is by Carl de Muldor; "The Afternoon Tea Painting-Book," by J. G. Somerby and H. H. Emerson. "Japanese Homes and their Surroundings" are beautifully described and illustrated by Edward S. Morse. Kunhardt's book on "Yachts" is a large illustrated work. Others are: "Heavy Ordnance for National Defense," by W. H. Jaques, also the author of "Ericsson's Destroyer and Submarine Gun: their Application to Naval Warfare, and a Short History of Naval Artillery"; "Instructions in Rifle and Carbine Firing," by Capt. S. E. Blunt, U. S. A.; "The Colors and Color-Guard Regulations," by F. Oborski; "A Treatise on Communication by Telegraph," by Morris Gray; "Land Surveying on the Meridian and Perpendicular System," by W. Penman; "Topographical Surveying," by J. B. Johnson; "Topographical Drawing," by Lieut. R. R. Smith; "Modern Ship-building," by D. Pollok; "Healthy Foundations for Houses," by Glenn Brown; "The Principles of Expression in Piano-Forte Playing," by A. F. Christiani. "How should I Pronounce?" is a little manual by W. H. P. Phyfe, and "The Child's Voice: Directions for its Treatment," by E. Behnke and L. Browne. "School-Keeping, by Hiram Orcutt. "Education in Relation to Manual Industry" is treated by Arthur MacArthur. "The Descriptive Catalogue of Government Publications," by Ben Perley Poore, is now finished. It includes the titles of over sixty thousand books and pamphlets. Profs. James A. Harrison, of Washington and Lee University, and W. M. Baskervill, of Vanderbilt University, have prepared, in convenient form, "A Handy Poetical Anglo-Saxon Dictionary," which is based on Groschopp's Grein, and has valuable appendices.

Statistics. — According to the "Publishers' Weekly," the statistics of book-publication in the United States in the past two years are as follow:

CLASSIFICATION.	1884.	1885.
Fiction	948	934
Theology and Religion	380	435
Law	455	431
Juvenile Books	358	388
Education, Language	227	225
Medical Science, Hygiene	209	188
Biography, Memoirs	178	174
Poetry and Drama	222	171
Social and Political Science	168	163
Description, Travel	136	161
Literary History and Miscellany	186	148
Fine Arts and Illustrated Books	81	140
History	115	137
Useful Arts	154	100
Physical and Mathematical Science	134	92
Sports and Amusements	51	70
Domestic and Rural	43	30
Mental and Moral Philosophy	19	25
Humor and Satire	29	18
Total	4,088	4,030

LITERATURE, BRITISH, IN 1885. The even tenor of the literary history of the year was hardly broken by an event of major importance, so far as Great Britain was concerned. No author of acknowledged repute in any department produced a work destined to exercise any grave or prolonged influence over mankind; and if minor lights loomed suggestively above the literary horizon, their brilliance proved to be but a transient flicker, and not a sustained illumination. Probably the most important work was in the direction of investigation and research into the lives of eminent persons, or in unknown or little-known lands. Neither history, poetry, science, nor art developed any production of vital interest, while in the remaining branches of authorship there is apparent, rather than any original conception, a filling up of vacant spaces, a clearing away of error and confusion, valuable, no doubt, but offering nothing startling in the way of real progress.

Fine Arts. — Several important translations were published, among which may be mentioned that portion of the great undertaking of MM. Perrot and Chipiez which treats of Phœnicia. The Cassels have added to their series of hand-books Duval's "Artistic Anatomy," Wauter's "Flemish School," and Chesman's "English School"; and Mr. L. M. Solon has brought out a valuable work on the "Art of the Old English Potter." Mr. Hamerton, who is always suggestive and instructive, without being too didactic, has published a clever study of "Landscape," and Mr. Gilbert has treated the same subject as it appears in "Art before Claude and Salvator." The third edition of Poynter's "Ten Lectures on Art" has been issued, and a new edition of Sir George C. M. Birdwood's "Industrial Arts of India." The English translation from the French of Eugène Muntz of "Raphael: his Life, Works, and Times," should also be mentioned.

History.—The "Chronicles of the Reigns of Stephen, Henry II, and Richard I," have been prepared under the editorship of Mr. Howlett, from the Stowe, Lambeth, and Cotton MSS., for the publication of what is known as the "Rolls Series"; Powell and Mackay's "History of England" appeared in Part I, and Gairdner's "Letters and Papers, Foreign and Domestic, of the Reign of Henry VIII," reached its eighth volume. "Royalty Restored" presents London under Charles II, and is by Mr. Molloy. Mr. W. Harris has prepared and published a history of "The Radical Party in Parliament"; Mr. James Bass Mullinger has issued his "History of the University of Cambridge," as far as to the accession of Charles I; and three writers—Dowell, Hall, and Chester, respectively—have made public their views on the subject of "Taxation in England," in three separate works. Gindely's "History of the Thirty Years' War" has been translated, as has also Dr. Conrad's "History of the German Universities for the Last Fifty Years." Ancient history is represented in Church's "Roman Life in the Days of Cicero," Del Mar's "History of Money in Ancient Countries," and Oman's "Art of War in the Middle Ages." More recent history is presented in Lady Bellair's account of "The Transvaal War," and Nixon's "Complete Story" of the same episode, J. G. Scott's narrative of the "France and Tongking Campaign," Greswell's "England's South African Empire," and Jean's "England Supreme"; and we have Probyn's history of Italy "From the Fall of Napoleon," and Hodgkins, in his "Italy and her Invaders," vols. iii and iv.

Essays. — In this pleasant class of literary work, the charming collection produced under the title "Obiter Dicta," and anonymously, is quite the best of the year. Then there were Dr. E. A. Abbott's "Flatland"; Richard Jefferies's "Wild England," a glance into the future on the basis of Macaulay's celebrated "New-Zealander"; J. H. Ingram's book on the history and literature of Poe's "Raven," Verrall's "Studies in Horace," Lady Martin's (Helen Faucit) papers on "Some of Shakespeare's Female Characters," George Edmundson's essay on "Milton and Vondel," Mrs. Orr's "Hand-book to the Works of Robert Browning," Saintsbury's "Specimens of English Prose Style," Coupland's analysis of "The Spirit of Goethe's Faust," and—last, not least—Matthew Arnold's "Discourses in America."

Biography. — The department of biography and autobiography was fully covered during 1885, the number of works produced being large, and including many of a manifestly important character. The "Life and Letters" of George Eliot was received with general approbation and great public interest, and called forth a large number of *brochures* by authors, known and unknown, who considered features of the life of this remarkable woman and distinguished writer. Mrs. Garden's life of her father, "the Ettrick Shepherd," was published under the title "Memorials of James Hogg"; Mr. Reid's memoir of Sydney Smith, Dr. Edwin A. Abbot's study of the life of Francis Bacon, and Dr. Alexander Nicholson's "Memoirs of Adam Black," were among the lives of noted Englishmen; while lighter writings of a biographical sort were Mr. Masson's study of Carlyle "Personally and by his Writings"; "The Brontë Family," by Francis A. Leyland; Mr. Jeaffreson's "The Real Shelley, with New Views of the Poet's Life"; and Mr. Dolby's recollections of Charles Dickens.

The list of autobiographies included a most interesting series—the Rev. Mark Pattison's "Memoirs," Rev. T. Mozley's "Reminiscences of Towns, Villages, and Schools," Mr. Edmund Yates's "Memoirs," Sir Henry Taylor's and Earl Malmesbury's "Autobiography," and the impressive "Journals" of Gen. Gordon. The "Souvenirs of a Diplomat," by Zanini, and Gallenga's "Adventures," are entertaining sketches, dramatic and interesting, as were also the "Souvenirs" of Mr. Archibald Forbes. The "Autobiography of Berlioz" attracted general attention among those specially interested in music, and Mrs. Calderwood's "Letters and Journals" delved among reminiscences of the last century, interesting to all.

The field of historical biography was well covered, and added many valuable works to general literature. Among these were the second part of the now famous "Greville Memoirs," Legge's "Life and Times of Richard III," Mrs. Higgins's "Women of Europe in the Fifteenth and Sixteenth Centuries," Mr. Masson's "Richelieu," "The Public Letters of John Bright," collected and edited by Mr. H. J. Leech, and Cox's "Greek Statesmen." The biographies of women include, also, those of Miss Martineau and Mary Godwin, among "Eminent Women," the "Famous Women of the Day," by Miss Hays, and memoirs of Miss Havergal, Eliza Fletcher, and Dora Greenwell.

Religious biography includes the "Lives of Robert and Mary Moffatt," Brown's new life of Bunyan, and biographies of Bishop Gobat and Dr. Sandwith. Finally, among the lives of men distinguished in science or in the profession of arms are those of Darwin, by Grant Allen, biographies of Louis Pasteur and Frank Buckland, "Malthus and his Work," by Bonar, Leslie Stephen's life of Mr. Fawcett, and monographs, including brief sketches of the Stephensons, Gordon, Turner, and Handel, under the general title of "The World's Workers." Besides these should be mentioned Mr. Leslie Stephen's "Dictionary of National Biography," of which several volumes have appeared, Mr. Gillou's biographical dictionary of "English Catholics," and, among dictionaries, the "Encyclopædic Dictionary," Halkett and Laing's "Dictionary of Anonymous and Pseudonymous Literature," a "Dictionary of English History," and Mr. Platt's "Dictionary of Classical Hindi and English."

Poetry.—Mr. Tennyson produced one or two short poems during the year, contributed to the magazines, and toward its close his "Tiresias," a collection of his more recent writings. The production of his dramatic effort, "Becket," was also a feature of the year. The presentation of Robert Browning's "Colombe's Birthday" by the Browning Society, should be noted, and a dramatic work, "Marino Faliero," by Mr. Swinburne, also marks the tendency toward stage representation of the leading poets. Matthew Arnold published a collection of his poems in three volumes, and Edwin Arnold his "Song Celestial" and "The Secret of Death," both from his favorite Sanskrit sources. Mr. Austin Dobson issued a collection of his verse under the title of "At the Sign of the Lyre," and Mr. Alfred Austin another entitled "At the Gate of the Convent." Jean Ingelow printed "Poems of the Old Days and the New"; Mr. J. Addington Symonds offered some Latin student-songs of the twelfth century in an English dress in his "Wine, Women, and Song"; Mr. Andrew James Symmington published a volume of "Poems," Owen Meredith's "Glenaveril" appeared, and the "Shelley" of the late James Thomson completes the rather meager list of English poetical works.

Fiction.—The sudden popularity, followed so closely by his untimely death, of Mr. Fargus (Hugh Conway), was the event of the year in fiction. His "Called Back" and "Dark Days" attracted general interest by a weird originality, and these works have been followed by a number of other novels, including "A Family Affair," "Slings and Arrows," "At what Cost?" and "Carriston's Gift." Quite as valuable contributions to this class of literature were the works of F. Warden, a lady, whose "House on the Marsh," published in 1884, has been improved upon in "Deldee," "A Prince of Darkness," and "A Dog with a Bad Name." Mr. Anstey brought out his "Tinted Venus" and "Black Poodle," which, however, did not fulfill the promise of his previous work. Lucas Malet (Mrs. Kingsley-Harrison) published "Colonel Enderby's Wife," Grant Allen a three-volume novel called "Babylon." Mr. Walter Pator's "Marius, the Epicurean," attracted attention as the philosophical novel of the year, and Mr. T. Hall Caine appeared in the "Shadow of a Crime."

Mrs. Macquoid is responsible for two books, "Louisa," over her name, and "At the Red Glove," published anonymously; and Mrs. Oliphant two, "Madam" and "The Open Door," under the same conditions. Miss Yonge brought out "Two Sides of a Shield"; Ouida's "Othmar" continues the history of "The Princess Napraxine," and "Mrs. Keith's Crime" and "White Witch" appeared anonymously.

Mr. Norris gave us "Adrian Vidal," a well-written but not agreeable novel. Mr. F. W. Robinson brought out "Lazarus in London," Robert Buchanan "The Master of the Mine," Mr. James Payn "The Talk of the Town," Mr.

Farjeon "Self-Doomed" and "The Sacred Nugget," and George Meredith a really clever book, "Diana of the Crossways." Mr. William Black's contribution to the fiction of the year was "White Heather"; and a very bright and entertaining novel, "Red Ryvington," by a new author, Mr. Westall, completes the list.

Theology.—The most important event in this department was, of course, the publication of the revised Old Testament, although this did not create the universal popular interest that was awakened by the appearance of the revision of the New Testament. Edersheim's "Life of Christ" was remarkable for its evidences of rare learning. The same author published a volume of Warburton Lectures on "Prophecy and History in Relation to the Messiah." There were also published Canon Fremantle's Bampton Lectures for 1883 on "The World as the Subject of Redemption," and Pfleiderer's Hibbert Lectures for 1885 on "The Influence of Paul on the Development of Christianity." Dr. Plumptre's "Spirits in Prison," Dr. Martineau's "Types of Ethical Theory," and Principal Tulloch's "Movements of Religious Thought in Britain during the Nineteenth Century," were among the leading works in general theology.

Of works in Biblical criticism, Archdeacon Farrar's "Messages of the Books" should be mentioned, also Dr. Salmon's "Historical Introduction to the Books of the New Testament," Dr. Joseph Parker's "Apostolic Life," and Principal Edwards's "Commentary on the First Epistle to the Corinthians."

Voyages and Travels.—The English are great travelers, and each year sees from British tourists the literary result of journeys in all lands. Last year was no exception to the general rule. The usual number of writers on America did not come to the surface, however, only three books of this kind being noteworthy: Mr. Alexander Stavely Hill, M. P., published "Autumn Wanderings in the Northwest," from 1881 to 1884; Mr. J. E. Ritchie produced "To Canada with Emigrants"; and Mr. F. J. Rowbotham gave an account of "A Trip to Prairie Land." Africa, even, presents a better showing of travel: Mrs. Speedy's "Wanderings in the Soudan" took place seven years ago, but were not described until the interest in that country made the subject popular. Major Ellis brought out his "West African Islands," Mr. Boddy "To Kairwan the Holy," and Mr. Joseph Thomson "Through Masai Land," which lies in eastern equatorial Africa, and is but little known. Australia was visited and described by Hon. Harold Finch Hatton, in his "Eight Years of Work, Wandering, and Amusement in Queensland, New South Wales, and Victoria"; Mr. Forbes's "Eastern Archipelago" was published, and Chalmers and Gill produced their "Work and Adventure in New Guinea." Mr. Hornaday took his readers with him to India in "Two Years in a Jungle." Mrs. Leonowens wrote of India in general, and Dr. Kennedy of Benares in particular. Mrs. King published her "Diary of a Civilian's Wife" in India, from 1877 to 1882. Mr. Colquhoun wrote of his experiences "Among the Shans," and Mrs. Emily Innes of "Chersonese with the Gilding off." Mr. Hare visited the land of the Muscovite, and wrote "Home Studies in Russia," Stepniak discoursed of "Russia and the Tsars," Landsdell described his missionary expedition into "Russian Central Asia," Mr. Marvin published "At the Gates of Herat," and Vambéry gave his views on the anticipated "Struggle for India." Mr. Hare added to his voluminous list of works of travel "Holland and Scandinavia"; Mr. Sophus Tromholt wrote about "Under the Rays of the Aurora Borealis"; Mr. Richard Lovett of "Norwegian Pictures drawn with Pen and Pencil"; Major Johnson, traveling from the Piræus to Pesth, published "On the Track of the Crescent," and Spain was described by Mr. Lomas in "Sketches from Nature, Art, and Life." Travel in England was apparently confined to views of London, excepting Mr. and Mrs. Pennell's "Canterbury Pilgrimage," which was made on a tricycle. London itself furnished good material in Count Vasili's "World of London," Mr. Walford's "Greater London" being the immediate surroundings of the great metropolis; Mr. Hutton's "Literary Landmarks of London," and "Society in London," which was published anonymously.

Translations and New Editions.—During the year translations of Homer's "Iliad" appeared by W. C. Green, H. S. Wright, and A. S. Way. Mr. Ormsby progressed with his translation of "Don Quixote," and "The Lyrics of Camoëns" were put into English by Mr. Benton. J. A. W. Hunter translated Schiller's "Wallenstein" into English verse, and C. T. Lyall made translations of "Ancient Arabian Poetry."

New editions were made of many of the standard English authors. Middleton's works were edited by Mr. Bullen, the poems of Keats by Palgrave, and Gray's works by Mr. Gosse.

LITERATURE, CONTINENTAL, IN 1885. In its chief features the record of literature on the Continent, during 1885, is much the same as in 1884. Books in the various departments of literature have appeared in about the usual number, and, though there is nothing specially remarkable of itself to which attention is to be called, yet, amid more or less of political and social disturbances, literature has flourished to a fair extent, and numerous works of merit and value have found their way into print. As heretofore, we give the record in the alphabetical order of countries.

Belgium.—In the way of contributions to history during the year, there are two works that deserve special notice. The first is Baron K. de Lettenhove's "Les Huguenots et les Gueux," of which the concluding volumes have been published. The work is regarded as containing much interesting documentary matter, while at the same time it has been criticised as lacking in rigid impartiality respecting momentous questions at issue. The other work referred to is P. Havard's "Henry IV and the Princess de Condé," which, though displaying in full the king's discreditable habit of gallantry, is nevertheless said to be drawn from entirely trustworthy sources. M. Namèche's "Cours d'Histoire Nationale," from the Roman Catholic stand-point, has reached its fourteenth volume, and covers part of the Spanish period in the sixteenth century. Several volumes have appeared, devoted to the history of religious persecution in Belgium, to military costume, to the War of the Austrian Succession in Belgium, 1740 to 1748, and to the "Public Finances of Belgium" since 1830. Also, three academicians have discussed the obscure question as to the origin of the Flemish population in Belgium. Bibliography has been largely cultivated during the year. The last volumes of F. Vander Haeghen's "Bibliotheca Belgica" are very noticeable for rare and valuable matter. The Chevalier G. Van Havre has published a second edition of his remarkable "Bibliographie Liégeoise," which is a catalogue of all the books published in Liége since the seventeenth century, and of all the works concerning the old prince-bishopric of Liége. Various other works similar in design and character have appeared. In the fine arts, especially painting and music, H. Hyman's work respecting Flemish, Dutch, and German painters is particularly worthy of notice. Honorable mention also is to be made of Vander Straeten's and Grégoir's volumes on Netherland and Belgian musicians. The literature of travel and colonization is actively cultivated, and numerous volumes of merit have been published on Japan, the Congo State in Africa, Liberia, etc., together with travels in the United States and Mexico. Moral and political science has been enriched with several striking works, such as J. Delbœuf's "Sleep and Dreams," G. d'Alviella's essays on the origin of idolatry, Woeste's political, religious, and historical sketches and studies, Prins's essay on penal science, and Laveleye's third edition of his "Contemporary Socialism." "Young Belgium," as noted last year, is active and efficient, chiefly in fiction, in which C. Lemonnier, Hins, and Bodenbach are prominent. Notes on modern literature are furnished by F. Nautet, and P. de Decker has written a life of the novelist Hendrik Conscience (who died in 1883). Sleeckx's "Literature and Art," and Rooses's "Sketch-Book," are excellent productions. The latter treats of contemporary Flemish authors and poets, and gives a lengthened study on Taine. F. de Potter has begun a history of Ghent, from early to present times, and various other contributions to Flemish history have been published. In poetry not much has been done that requires mention. Pol de Mont and Julius de Geyter seem to stand foremost in this department. Miss V. Loveling's new tale, "Sophie," a vivid picture of clerical tyranny in Flanders, has excited much attention and had a large sale.

Bohemia.—Bohemian literature, though heretofore not reckoned as of much account in our annual survey, deserves a paragraph at least. It has of late years been making progress, and in poetic and dramatic productions the record is very good. Fiction also is prosperous. Smilovsky and Trebizsky, two of Bohemia's best writers, have recently died; but Cech, Schulz, Vlcek, and others, sustain the national reputation. Illustrated works are much in favor. Bohemia and the castles and palaces of Bohemia are set before the reader with both pen and pencil, in highly creditable style. In history, philology, and philosophy, Bohemian writers have done well. The "History of the City of Prague," by Tomek, and "The History of Moravia," by Dudik, together with other works in this department, are highly praised. Also, a history of Bohemian literature, a very large and full Bohemian dictionary, and a history of philosophy, give abundant tokens of spirit, scholarship, and enterprise of Bohemian *savants*, as well as of an appreciative public.

Denmark.—Although political troubles have been prominent in Denmark, still the book market of 1885 gives evidence of life and interest in literature. Romances and novels are numerous, if not specially brilliant or profound. New writers have appeared in this field with success, and the men of established reputation have supplied various additions to the novels and stories of the year. T. Lange, V. Bergsöe, and S. Schandorph, are criticised by the press as hardly equaling previous contributions. "Youthful Love," by H. Pontoppidan, one of the younger authors, is said to be the most interesting tale of the year. Several female writers also have taken share in this work. O. M. Möller, in "The Reformer of Galilee," has tried to picture forth the life of our Saviour on earth, and with about as much nearness to success as can be expected on such a topic. In lyric poetry H. V. Kaalund's "Posthumous Poems," and C. Hostrup's "Newer Poems and Songs," are worthy of notice here. H. Drachmann, the highly gifted Danish poet, is censured by the critics as having deserted the position maintained by him in former years. In the drama there is hardly anything of importance to mention. E. Brandes, E. Christiansen, and J. Lange, in his "Art and Politics," have contributed fairly to the drama. The field of history, especially Danish history, is industriously cultivated by Thorsöe, Bache, Nielsen, and others, and their contributions are regarded as valuable. E. Brandes gives a lively narrative of his experiences and observations in "Berlin." R. Kaufmann portrays "Life in Paris." Several interesting autobiographical works have appeared, as also a goodly number of new books of travel. In philosophy C. Lange furnishes a work of real value, showing the connection of the emotions with the physiological alterations in the body. F. Jungersen writes on "What is Truth?" A. C. Larsen supplies a timely volume, "The New Testament and Historical Criticism," and E. Brandes contributes to political economy two popular treatises called "Social Questions."

France.—The death of Victor Hugo, the national idol in French literature, is noteworthy as bringing to a close a literary era, that of Romanticism. Hugo was long regarded as the recognized symbol of French literature; yet independent critics (like F. de Pressensé) maintain that "Victor Hugo, as a literary power, died long before the Pantheon closed its doors over his pompous obsequies. Romanticism in France has ended in one of the most notorious failures ever experienced by any literary school." As a vivifying influence Romanticism has long been extinct in France, and though Hugo was absolute sovereign through exaggerated sentiment of deference and veneration, yet criticism is reasserting itself and its right of free judgment. There will be no attempt to deprive him of his legitimate glory, but rather a seeking to draw up a faithful and just inventory of what this great genius has bestowed upon his country and mankind. Novels take the lead this year, and Zola stands at the head of French novel-writers. His last work, "Germinal," is the most powerful since the famons "L'Assommoir." His imitators and followers are very numerous, and carry out the realistic scheme of story-telling to an abominable and disgusting extent. Hundreds of novels of this sort have appeared, all cast in the same mold, and, while pretending to reproduce life, systematically repudiate all that ennobles it, all that illumines the daily horizon, all that warms and perfumes the atmosphere, and take up only that which wounds and repels, which is ugly and mean and vile. There are some signs of a reactionary spirit, but not yet to any great extent. What may be called psychological novels are gaining favor. Daudet, Theuriet, Maupassant, and others are doing good service in this respect. Novels also of the Dumas type are quite numerous, mostly appearing as serials in the newspapers and having myriads of readers. Poetry presents no record of success or encouragement. The critics are very severe upon the productions of the year as being a triumph of mere form and harmony rather than as indicating living fire from above. Possibly this judgment is too severe; but, as there is no dissenting voice, it may be regarded as substantially correct. Criticism as an art has declined since the death of St. Beuve. M. Scherer, however, is doing good work in this department, as also are P. Bourget, in his "Essays on Contemporary Psychology," and his "Cruelle Enigme," and E. Hennequin, who is perhaps the best furnished and ablest French critic of to-day. Other names might be mentioned, but space does not permit. M. Renan has written an ambitious drama, entitled "Le Prêtre de Némi." It completes the trilogy with "Caliban" and "Fontaine de Jouvence," and is an attempt to equal and rival Shakespeare. Of course, Renan can not accomplish any such end, but he uses the present as the vehicle for reasserting and emphasizing his doubts and difficulties, not only in religion, but in regard to the moral, political, and social problems that have beset France since the sad waking up from the Année Terrible. Renan is not a born dramatist, but puts forth philosophical dissertations in the shape of dialogues. Contributions to history and philosophy have been of excellent quality. The "Letters of Quinet," the "Correspondence of Madame de Rémusat" and her son, an anonymous work on the latter years of the consulate and establishment of the Empire, M. Simon's "Thiers, Guizot, Rémusat," are works of merit and value. M. Rambaud has written a clever "History of French Civilization," and M. Sorel has published a learned and important work entitled "Europe and the Revolution." The critics give Sorel's volume very high praise, affirming that nothing since de Tocqueville's latest essay on the old *régime* can compare with it. The Comte de Martel, in his "Historiens Fantaisistes," has reviewed with terrible severity Thiers's "History of the Consulate and the Empire." Numerous other historical essays and contributions have been published, but we can not here go into details. Several volumes on science and philosophy may be named, as Berthelot's "Origin of Alchemy," Réville's "Religions of Mexico, Central America, and Peru," Janet's noble tribute to the memory of Victor Cousin, Joubert's Louis de Clermont, Sieur de Bussy d'Amboise, in the time of Henry III, etc. The literature of travel and exploration has received attention from Perret, Janvier, Tissot, Daryl, and others.

Germany.—The general literary production of 1885 in Germany maintained about its usual level, and books in large numbers in various departments were published. In biography the record is good; in history, quite strong; in philosophy and science, of small account; in criticism, fair; and in fiction and light literature, rather weak. In history the venerable Von Ranke continues his labors, despite his advanced age, and still writes with calm and steady vigor. Mommsen, the famous Roman historian, whose work is well known by its translation into English, has published his fifth volume. This appears in advance of the fourth, and is specially devoted to the provinces rather than to Rome itself. Several noteworthy contributions to history have appeared, as F. A. Specht's "History of Education in Germany, from the Oldest Times to the Middle of the Thirteenth Century," H. Baumgarten's "History of Charles V," and A. Huber's comprehensive "History of Austria," two volumes, which bring the record down to 1437. In biography there has been considerable activity. "The Life and Times of Voltaire" and "The Life of Rousseau" are treated of with care by

Mahrenholtz and Janvier. The Goethe literature seems to keep on growing, and fresh documentary matter of importance is expected to appear, now that the poet's last grandson has died. H. Duntzer has supplied a new biography of Goethe, which is not praised by the critics. A. Stern has given a "Life of H. Hettner," a clever historian of German, French, and English literature in the eighteenth century, and Von Reumont has issued a valuable "Life of King William IV." In the realm of poetry A. Meissner's death is regarded as a positive loss. The product of the year has not been remarkable or encouraging. Gensichen's "Frauenlob," Baumbach's "The Godfather of Death," and A. von Putkammer's lyric "Poems" are all that we can name here. E. von Wildenbruch has followed up his tragedy of "Harald" by another taken from the history and fate of Christopher Marlowe. The drama has merit certainly, but it does not equal "Harald." F. von Saar, another eminent German dramatist, has published "Thassilo," which has points of comparison with Shakespeare's "Hamlet." Both the dramas just named are said by the critics to contain passages of great beauty and force. In fiction, George Ebers, in his last novel, "Serapis," occupies again his favorite field on the Nile. The critics point out the similarity in this novel to Kingsley's "Hypatia," at the same time pronouncing it inferior to the latter in poetic charm and philosophical and religious depth. Novels seem to increase in number as the years roll on. "Ietta," by George Taylor; "Die Siebalds," by W. Jordan, and "Die Saxo-Borussen," by G. Samarow, are among the few noted with approval. A. Kielland's "Fortuna," and Sloet's "Sins of the Fathers" are also named as good specimens of stories, with a didactic, moral purpose in view. In philosophy it appears as if the heroic age of German philosophy had passed away forever. Some are anxious for a return to Kant. Others deny to Kant all claim of originality. Constant attempts at new theories of knowledge and cognition are made, in connection with Kant's "Critique." Schubert, Brodbeck, and Glogau deserve especial mention here. Drobisch and Dietrich also are named in this connection. F. Todl's "History of Ethics" is pronounced to be valuable, as is also C. Werner's "History of Italian Philosophy in the Nineteenth Century."

Greece.—Notwithstanding the serious disturbance of this year in eastern Europe, in which Greece had its full share, considerable intellectual activity has been displayed, and a fair literary production. In history the publications have been quite numerous. C. Sathas has brought out the sixth volume of his great collection, "Monumenta Historiæ Hellenicæ," and also a monograph on the Greek Stradiotes in the west. M. Dimitsas has published a "History of Alexandria from its Foundation till the Arab Conquest." A. Paspastis has written a very interesting volume on "The Imperial Palaces of Byzantium," which is valuable for the topography of Constantinople in the middle ages. National history excites much attention, and several able writers have devoted themselves to its illustration. In philology the Greeks have shown themselves to be active and successful. G. Chatzidakis, in his "Studies on the Modern Greek Idiom," J. Sakellion, in an edition of the "Letters of Theodoret," the ancient historian of the Church, and A. P. Kerameus, in a first installment of a description of the MSS. preserved in the Greek East, fully evidence this; and other writers have followed in the same line. The philosophical and educational publications of 1885 deserving notice are those of C. Papamarkos, director of the Normal School at Athens, "On the Object of the Education of Greek Youth"; G. Bizyinos, "On the Philosophy of the Beautiful, according to Plotinus"; and M. Evangelidis, on the "History of the Theory of Cognition." Several valuable works on education published this year show the deep interest the nation has in this important department. Fiction and works of travel seem to be steadily on the increase, and for the most part are issued in the weekly and even daily papers. Very few of these, however, have any special merit, and none of them are at all likely to survive their ephemeral origin. Two or three plays, a few poems, and some fragmentary essays are all that can here be chronicled.

Holland.—Novels of various sorts, and stories of all sorts, have appeared in Holland during 1885. The critics complain of the too general carelessness of style on the part of writers of this class, and name but few novels with approbation, such as M. Van Java's "Miss Campbell," Mrs. Westhreene's "Ver Vanden Stam," J. Van Woude's "Zÿn Ideaal," Ten Burch's "Outrouw," etc. Some religious novels of the proselyting description have been published, and also stories of the olden time, revived by Rogge and Rovers, which contain pleasing types of courage, piety, and earnestness. Poetry flourishes in the sonnets of W. Prins and the "Panopticum" of Mallinckrodt. Also, in Kate's "De Nieuwe Kerk," which tells of the foundation, history, etc., of the church in Amsterdam, this being to Holland much like what Westminster Abbey is to England. Translations from the English have found favor. Burgersdyk is rendering Shakespeare's plays into Dutch with success, and Le Comte has reproduced Tennyson's "Guinevere" in excellent style. Numerous new ventures in periodical literature have been made, which promise much that may or may not be realized. History has received fair attention in its various subdivisions. Dutch India, Borneo, Amsterdam, etc., have given rise to valuable works. An exhaustive history of the newspaper press in Holland has been brought out by R. Vander Meulen. B. Huët, in "The Land of Rembrandt," describes the unique character of the Dutch school of painting, the greatest glory of

Holland in the seventeenth century. Church history also and theology have called forth several excellent books. A new annotated edition of Bredero's works has marked the three-hundredth anniversary of that distinguished poet and dramatist. Viotta's "Lexicon der Toonkunst" is completed. New and cheap editions of some of the classic Dutch writers, as Potgieter, Mrs. Bosboom, Huygens, etc., have been printed.

Hungary.—The national exhibition of Buda-Pesth (from May 1 to Nov. 4, 1885) occupied the people of Hungary so fully this year that the outcome in new publications is meager and unsatisfactory. Charles Keleti published a volume on the economico-political condition of some of the countries of the Balkan, which is both interesting and instructive. Historical researches have not been wholly neglected, of course. The "Monumenta Vaticana Hungariæ" (1307–'11, and 1524–'26) contain valuable historical material. Also the "Codex Andavagensis," vol. iv (1340–'46), and several monographs. Salomon's "History of Buda-Pesth" is pronounced to be of superior excellence; three volumes have been issued thus far. Less important works are M. L. Fehérpataki's history of "The Royal Chancery in the Time of the Arpads," "Hungarian Historical Biographies," etc. Archæology has secured some attention. W. Lipp has published "The Sepulchral Fields of Keszthely," reaching back to a period before historical record. M. C. Pulszky has brought out the "Masterpieces of Goldsmiths' Work." Two or three good books on jurisprudence are worthy of mention, as G. Wenzel's "On the Hungarian Civil Law before 1848," A. Pulszky's "Principles of Law and Political Philosophy," etc. Philology offers nothing of special moment, and light literature hardly anything better. G. Csiky has produced a capital drama, "The Black Point," and M. A. Berczik has obtained general applause for his charming comedy, "The Queen of the Ball." Among novelists M. M. Jokai maintains his supremacy. The critics call him "The Giant of Hungarian Literature." Other writers have done well, however, as Pálfy, Szatmáry, and Mikszáth; and two or three ladies, Mrs. Gyarmathi, in her novel, "The Young Priest"; Mrs. H. Beniczky, in her tales, "The Mystery of Fate," "Born in the Dust," etc. Hungarian *savants* and patriots, while deploring the light results of 1885, claim that the country is advancing, if not fast, yet surely, in her educational progress, and will in the near future hold higher rank in European literature.

Italy.—The literature of Italy for 1885 presents a surprisingly barren aspect. Hardly anything has appeared which can be praised as a work of art, or as adding to the reputation or possessions of the country. Perhaps this is due to the intense devotion which Italy has manifested in securing political unity, hoping meanwhile for a literary revival to follow the attainment of that great result. Numerous books have been printed, although the sale is very limited. The reading public is not large, yet authors are increasing in number, and write rapidly and consequently imperfectly. "What is most absolutely necessary for Italian literature," says an able critic, "is that the reading public should increase, and the reason why this public is so small is that the average of cultivation in the nation is low; and although many reforms have been introduced into the system of public instruction, this system has been, and still is, very little adapted to improve matters." Periodical literature seems to flourish well, on the whole, and historical societies are doing good work in gathering materials for a history at some day of literature and art, and of political life and progress. Essayists are quite numerous, but are not regarded as equal, in style and matter, to those of England and Germany. Two may be named here: A. d'Ancona, who has published a second series of literary essays, said to be remarkable for critical acumen and felicity of expression; and E. Masi, in a volume giving life-like portraits of people and things as they existed in former days. These and other volumes are made up of articles collected by the writers from journals and reviews, a practice that prevails largely in other countries. P. G. Molmenti's "Studies in Venetian Art" have reached a third edition. Tarducci has written well on Christopher Columbus; and M. Minghetti, the statesman, has produced an admirable book on Raphael and his works. Zanella, the poet, has published a short study of Italian literature in the last century, which is said to be inadequate to the subject. In poetry little or nothing has been accomplished, and the poetic spirit in Italy seems to be in a state of vagueness and torpor. Novels have, as usual, been abundant, and in two respects deserve to be noted: first, the moral tone is good, not sensual like Zola's and his followers; second, there is a strong disposition to seek for subjects in Italian life and experiences. Critics speak in high terms of Prof. Barzellotti's work on David Lazzaretti, a man of the people, and believing himself to be the apostle of a religious and catholic revival. The work displays ability of superior order, and is written in a very attractive style. It is probably the best book published in Italy in 1885. Two distinguished authors have died, viz., T. Mamiani and A. Maffei, both of them above eighty years old. M. Amari, however, though very aged, is still living, and has brought out a new edition of his "Vespri Siciliani," which appeared over forty years ago. It is an admirable book, and the author has revised and improved it.

Norway.—The literary record of Norway for 1885 is not brilliant or important, but rather tame. The chief writers of note, Ibsen, Kielland, Lie, Björnson, have been either wholly or mostly silent. Among novels Mrs. A. Skram's "Constance Ring" is written with ability, but is pronounced by the critics to be rather coarse and defective in several respects. As it is a first venture, better work may be expected in the future. Jonas Lie has made a collection of some of his best stories, entitled "Eight Tales," most of which are striking and abound in interest, with a realistic tendency. Kristofer Janson, who is settled as a minister in Minneapolis, Minn., has published "The Saga of the Prairie," giving sketches of life and experience of Norwegian settlers in the Northwest. Novelettes have become very fashionable in Norway, and this year have been very abundant. P. R. Johnsen, K. Kristofersen, J. W. Flood, and others, have embarked in this kind of literature, and with good success. Two contributions to the drama have been made: one, by B. Björnson, entitled "Geography and Love," which is highly praised and has been produced on the stage with applause; the other, by H. Jaeger, entitled "An Inheritance," which is well written but is not thought to be the equal of Björnson's drama. O. A. Ocverland's "Illustrated History of Norway" gives results of research and study, and is written in clear popular style. The first volume is completed. J. B. Halvorsen's "Dictionary of Norwegian Authors" is advancing, but slowly, having reached only the letter D in five years. Among other historical works may be named here T. Blanc's "History of the Norwegian Stage"; D. Schnitler's "General History of War," vol. iv; Prof. Lieblein's "Old Egyptian Religion"; also, a collection of lectures and studies on art, by Prof. L. Dietrichson, a prolific and able writer. In philosophy the aged Prof. M. J. Monrad has sent forth "A Treatise on the Philosophy of Religion"; and a young writer, A. Löcken, has tried his hand upon "A Critical Study of J. S. Mill's Logic." A new medical review has been established, and Henry George's "Progress and Poverty" has been issued in a translation.

Poland.—The novel seems to take the lead in Poland at present. Kraszewski, though advanced in years, depicts contemporary social life with a practiced hand, and also illustrates Polish history in a series of admirably drawn pictures. J. T. Jez ("Milkowski") is distinguished as a delineator of the South Slavs and Polish peasantry. Madame Oezeszko uses topics of the day with much skill, such as enlightenment of the peasantry, the Jewish question, etc. Jan Law is noted as the wittiest of Polish humorists, and is also a man of deep observation. The writers of novels are very numerous and exhibit much talent, such as J. Zachariasiewicz, E. Lubowski, M. Baluski, J. Rogosz, etc. The novelette is growing in favor in Poland. The newest school of writers manifests a naturalistic tendency, and tales after the manner of Emile Zola begin to appear. The publications of A. Dygasinki and Madame Zapolska are favorably named in this connection. In dramatic literature nothing of much note has appeared. K. Zalewski has brought out a comedy, "Friebe," with much applause, and S. Rzewski two pieces, "The Optimists" and "Dr. Faustina," which are said to be marked by excessive pessimism. There is no new production in lyric poetry. The year has been marked by translations and republications of old works. History is limited to some biographical contributions, such as Kalinka's "Life of General Chlapowski," Widman's "Life of F. Smolka," etc. "The Statutes and Privileges of the City of Cracow" have been printed. Æsthetic and historical criticism presents a better record. R. Chmielowski has produced an exhaustive work, viz., "Polish Female Writers of the Nineteenth Century," compiled with learning and skill. H. Biegeleisen's æsthetic and literary study on "Pan Tadeusz" of Mickiewicz is marked by great industry and no little acuteness. Other writers have published monographs of value. V. Crajewski has written a history of Bohemian literature and executed his task well.

Russia.—Literature this year in Russia has suffered severely by the ravages of death among native authors. Such men as Ternofski, Professor of Russian History at the Kiev Academy, a scholar of the first rank, and Kistiakofski, Professor of Criminal Law in the University of Kiev, and one of the ornaments of the Russian bar, have been taken away; as have also Count Ouvaroff, devoted especially to archæology and palæontology, and author of several valuable works in this department, and Prof. Kostomarof, eminent for genius and learning, and distinguished for his contributions to history. To these may be added the names of Prof. Kavelin, able and active on all questions of the day, and Senator Kalatchef, of Moscow University, famous for his labors in connection with Russian jurisprudence and archæology. The popular and favorite Russian satirist, Stchedrin, has been very active this year, and has done good service. Count L. Tolstoi, the great Russian novelist, has published two charming tales, and described his wanderings among the dwellings of the destitute in Moscow. This latter was much read, and made a deep impression, but the Government forbade its being printed for public use. .Grigorivitch has issued a charming novelette, "The Mountebanks of Philanthropy." M. Korolenko is a new author, and indicates possession of high order of ability in novel-writing, and M. Muravlin has attacked with great energy the loose morals of the aristocracy. M. Ouspenki also deserves to be noted for his able and effective "Sketches of Russian Life." In poetry, M. Nadson and M. Frug, both disciples of Nekrasof, have published poems on the social questions of the day, which are highly praised by the critics. Ostrofski seems to be the only one who has contributed to Russian dramatic poetry this year. History and cognate subjects received much attention in 1885. Korsch's "History of Universal Literature" continues its course toward completion. Vols. xvi to xix have been published, bringing the record down to the time of the Reformation. There have also appeared vols. xxxiv to xxxvi of the "Memoirs" of the Russian Literature Section of the Academy of Sciences; Prof. Porfirief's "History of Russian Literature," vol. ii; M. Tchinko's "Studies of Contemporary Russian Poetry"; "Complete Works and Correspondence of Pletnef," containing valuable material for study of Russian literature in the early part of the nineteenth century; and Mme. Shitof's "Reminiscences," which give an interesting account of Tourguénief's mother and his early life and training. Prof. Ilovayski has brought out vol. ii of his "History of Russia," covering the fourteenth and fifteenth centuries, a work of fair merit for popular use. Prof. Antonovitch has published "Monographs on the History of Western and Southern Russia," a work of great accuracy and reliability. The history of the serfs and serfdom has received careful treatment from M. Semefski. Various personal memoirs of prominent men, as Count Tolstoi, Koshelef, Pirogof, and others, have appeared, and are equally interesting and valuable for the uses of history. In social science Mme. Efimenko's "Researches into the Life of the People," and Prof. Loutchisky's "Collection of Materials for a History of Communal Property in South Russia," are regarded as timely and important. Two statistical works have been published during the year: one, "The Finances of Russia in the Nineteenth Century," by M. Bloch, four volumes; the other, by M. Brjesky, which deals with "The Debts of the Russian Government." This latter is particularly interesting and instructive, in view of the tremendous pressure of debt, almost to bankruptcy, which weighs down the Russian Empire and people. In economic science Prof. Ivanioukof has furnished an excellent volume, clear, exact, well written. M. Kablukof has dealt with "The Agricultural Labor Question" very satisfactorily. Prof. Yanjul has published two volumes of "Essays and Studies" on this subject, gathered from various periodicals and worthy of preservation. In legal science M. Dril's "Infant Criminals" is a remarkable book, and discusses carefully an important topic. Also, Prof. Mouromtzof's pamphlet "What is meant by Legal Dogma?" and Prof. Kavielin's excellent work, "Outlines of the Legal Relations arising out of the Inheritance of Property," indicate the ability and spirit of the Russian bar. Other subjects, philosophy, military history, travels, etc., have occupied their usual place in Russian literature, in 1885; but with this general notice we must here close our record.

Spain.—Internal troubles have weighed heavily upon Spain during 1885—earthquakes, cholera, death of the King, etc.—yet literature has not been neglected or unfruitful. About three years ago was begun the publication, in monthly parts, of "El Libro de Retratos de Francisco Pacheco." It has now reached completion, and contains sixty-two portraits (reproduced by the photo-litho-zincographic process) of the contemporaries of Pacheco, the celebrated painter of the Seville school. These range between 1592 and 1645, and with the brief biographical notices form a work of rare interest and value. The Royal Academy of History has published two essays, one on Columbus and Pinzon, the other on the Duke of Ossuna, Viceroy of Naples, 1616–'20. Both monographs were written by Capt. Don C. F. Duro, and are regarded as worthy additions to historic lore. Various other contributions to history have been published, such as R. Villa's "Italy from the Battle of Pavia to the Sack of Rome" (1525–'27); Pella's "History of the Ampurdan"; Acevedo's "Historical Essay on the Asturias"; a new edition of Contrera's "Description of Granada and its Moorish Antiquities"; together with Galdo's "National Episodes," vol. viii, handsomely illustrated. Galdo is also a novelist of considerable repute, and has published lately "Lo Prohibido." Other novels are: "Sotileza," by Pereda; "El Cisne de Vilamorta," by Doña Bazan; "The Executioner's Daughter," by Castellanos; "Antonia Fuertes," by the Marquis de Figueroa, etc. Most of the novels of the year are but indifferently praised by the critics. What is called "folk-lore" has met with much favor in Spain, such as "Folk-Lore Catala," two volumes, "Cuentos y Leyendas de Galicia," "Cuentos de Alcantara," "Folk-Lore Gallego," etc. Also "Leyendas Moriscas," traditional stories principally founded on the Koran and preserved by the Moriscos. In poetry Campoamor has issued three new poems, which well sustain his high reputation. Nuñez de Arce has published a new edition of his "Glorias Nacionales," and Selga has produced more charming "New Loose Leaves." Numerous other contributions to poetic literature have been made by younger poets. Dramatic art seems to be on the decline. Excepting one new drama by Echegaray, and one comedy by Campoamor, hardly anything has been produced but short, light pieces, of no particular moment. Three new volumes have appeared of Macpherson's translation of Shakespeare. In the way of dictionaries, grammars, and philological works, there has been a good supply this year, such as a new edition of the Royal Academy's "Dictionary of the Spanish Language," Rodriguez and Martin's "Novísimo Diccionario Castellano Harmónimo Ortográfico," etc. Moral and political sciences have received due attention, and a number of valuable works have been published in their interest, such as "Transactions of the Academy," Castelar's "Discursos Parlamentarios y Politicos," Perojo's "Politica Colonial," Pelago's "Historia de las Ideas Esteticas in España," Aorta's study on "The Idea of Right," as contained in the old Spanish proverbs and romances, etc. We may further note that reprints of older writers are quite numerous, that a new fortnightly review has made its appearance at Seville, and that journalism is increasing in activity and force. On the whole the outlook for Spanish literature is good.

Sweden.—As in several European countries, so in Sweden, the novel takes rank over other branches of literature. Among those named with favor in this line are a lady, *nom de plume* Ernst Ahlgren, who makes a *début* with romantic sketches of life entitled "Money"; T. Hedberg, in a character-sketch, "Johannes Karr"; G. Nordensvan, in his "Figge," based on artistic life; Mrs. A. Agrell, in a volume of novelettes, etc. In poetry Count Snoilsky, who is the most eminent of living Swedish bards, has published an historical poem, "The White Lady," in the Acts of the Swedish Academy. The younger authors have been busy this year. Strindberg, head of the naturalistic agitation in Sweden for some years, is settled in France, but has published a volume of novelettes, "Utopias in Real Life," in which he paints vividly the evils of war, etc. In the drama Mrs. Edgren has sent forth a play, "How People do Good," which the critics charge with leaning too much toward socialism and the like. The well-known Swedish humorist, Sigurd, has made a happy hit in his "Swedish Peasant Homes." H. Wranér has also presented "Pictures from the Peasant Life." To the same class of literature belong Chicot's "In Rocking-Chairs and Sofa-Corners," and "Our Plucked Ones," by a teacher at Lund, who well understands his subject. This latter volume is capitally illustrated by drawings executed by an eminent painter, Bruno Liljefors. In history has been published a new volume of C. G. Styffe's "Contributions to Scandinavian History from Foreign Records" (1504–'20). F. F. Carlson has brought out the second volume of his history of Charles XII, and C. T. Odhner has begun the publication of his history of Gustavus III. In philology Almkvist has issued the second volume of "Die Bischari Sprache," containing a Bishári-German and a German-Bishári vocabulary, with an index of Arabic words used by the author in explaining the Bishári. Autobiography is represented by "Memoirs of G. F. Gyllenborg," two volumes, and "Memoirs of Foreign Diplomatists from the Swedish Court," two volumes, by Scævola (i. e., an association of authors). W. Bergstrand's "Contributions to the History of the Scandinavian Union" deserve mention in this connection. The history of literature was not much cultivated this year. H. Schück, of Upsala, has begun a detailed history of Scandinavian literature from the earliest days to the present, and Robinson's "Realists and Idealists," and Hanson's "Literary Silhouettes," are contributions in the same line. Prof. Nordenskiöld has published a large scientific work for popular use, entitled "The Second Dickson Expedition to Greenland." Wrangel's "Servians and Bulgarians" and Dr. Munthe's "Letters from Naples" deserve mention in this place. Prof. Nyblom has published an essay commemorating the one hundred and fiftieth anniversary of the Academy of Fine Arts, celebrated in 1885. F. Hedberg has made another contribution to his previous work in 1884 on Swedish actors. A very elegant work of art also appeared this year, containing reproductions of paintings by Swedish, Danish, and Norwegian painters. Miss Ellen Fries (the only woman, by-the-way, in Sweden, who has the degree of Ph. D.) has recently published a pamphlet containing researches into primary female education in France, made for the benefit of like education in Sweden. Two popular works on national economy have appeared, and an account of the law procedure in England, which is, it appears, quite diverse from that prevalent in Sweden. This last volume is by G. Fahlerantz, who has studied the subject during residence in England, and also presents matter of interest and value for the consideration of his countrymen.

LOUISIANA. **State Government.**—The following were the State officers during the year: Governor, Samuel D. McEnery, Democrat; Lieutenant-Governor, Charles Knobloch; Secretary of State, Oscar Arroyo; Treasurer, E. A. Burke; Auditor, O. B. Steele; Attorney-General, M. J. Cunningham; Superintendent of Public Education, Warren Easton; Register of Lands, J. L. Lobdell; Commissioner of Agriculture and Immigration, W. H. Harris. Judiciary, Supreme Court: Chief-Justice, Edward Bermudez; Associate Justices, Felix T. Poché, Robert B. Todd, Thomas C. Manning, and Charles E. Fenner.

General Statistics.—At the time of the cession of Louisiana to the United States, April 30, 1803, the population was 49,473. The Government receipts for 1803 were $843,000, and the expenditures $700,000. In 1802 the province produced 3,000 pounds of indigo, 20,000 bales of cotton, 5,000 hogsheads of sugar, 5,000 casks of molasses, and 200,000 pounds of loaf-sugar were refined. The exports were 40,000 tons, arrival of vessels 256, departures 265. Over 1,200 sugar-houses are in operation with improved machinery. The average annual product is 250,000 to 300,000 hogsheads of sugar and over 15,000,000 gallons of molasses. The rice-crop is about 300,000 barrels; the cotton-crop of the State is from 500,000 to 600,000 bales.

Prohibition Convention.—The first Prohibition State Convention ever held in Louisiana met in Shreveport on Aug. 19. It resolved—

> That this movement is non-partisan and non-sectarian in character, and seeks only to enlist the active co-operation of all patriotic and law-abiding citizens, without regard to race or party, hoping thereby to secure the hearty support of all temperance, benevolent, and church organizations, in the legal suppression of the liquor-traffic.

A State Executive Committee of one from each congressional district, and three at large, was constituted, which was instructed to memorialize the Legislature to change the wording of the local-option act so as to make it the duty of the police juries of the several parishes, whenever requested by petition of citizens, to submit the question of license to the votes of any parish, either by wards or by the parish as a whole, and if at an election by wards the majority of the total vote cast be in favor of prohibition, the same shall be in force in all the wards of the parish for twelve months.

The convention declared in favor of temperance education in the public schools, and instructed the Executive Committee to memorialize the State Legislature to pass an act prohibiting the traffic in intoxicants within two miles of any school-house or church, except in the case of incorporated cities or towns.

Crops.—We present a summary of the sugar-crop of Louisiana by years, from Bouchereau's statement. The years are not calendar, but close with the final disposal of the crop:

YEAR.	Hhds.	YEAR.	Hhds.
1864	10,387	1874	116,867
1865	18,070	1875	144,146
1866	41,000	1876	169,331
1867	37,647	1877	127,753
1868	84,256	1878	213,281
1869	87,090	1879	169,972
1870	144,881	1880	218,314
1871	128,461	1881	122,982
1872	108,520	1882	241,220
1873	89,498	1883	221,515

The cotton-crop of 1885 is placed at 511,350 bales, raised on 1,022,700 acres. The rice-crop of the year much exceeded in quantity any previous one, but, owing to bad weather and lack of labor in harvest, the quality was inferior. The following were the receipts at New Orleans to the close of the year:

RECEIPTS.	Sacks, rough.	Barrels, cleaned.
To date	666,000	40,000
At same date last year	303,000	22,000
This year's excess	363,000	18,000

About 173,800 barrels of cleaned rice in excess of last year at the same date. Estimating what remains in the country yet to arrive at 155,000 sacks rough, we shall have a total crop of 392,360 barrels of cleaned rice, compared with previous years as follows:

CROP.	Estimated barrels. clean.
1885–'86	392,360
1884–'85	202,000
1883–'84	227,500

Salt and Iron.—Petite Anse, or Salt Island, is 135 miles by rail west of New Orleans, and about ten miles from New Iberia. More than 100 hands are employed in the salt-works on this island. The daily shipments are from 100 to 250 tons. The American Salt Company claim that in Petite Island "there is in sight, to the level of our present floor, one hundred feet, a solid body of salt 45,738,000,000 cubic feet, which, at 125 pounds per cubic foot, is equal to 2.858,625,000 net tons; and through its entire mass wherever tested it has been found identical in character and purity."

Iron has recently been discovered in northwestern Louisiana. The iron country is an extensive district running in a northeasterly and southwesterly direction from Arkansas into Texas. At the upper and lower ends of the district the iron is being worked profitably.

New Orleans Committee of One Hundred.—In May a Citizens' Committee of One Hundred was organized in New Orleans, representing both political parties and all classes of citizens. The preamble to the constitution declares that, in view of the condition of municipal affairs in New Orleans, the persons who have subscribed the paper have formed themselves into an association for the following objects:

To maintain the purity of the ballot.

To secure the nomination and election of proper candidates for office.

To bring to punishment those who have been guilty of election frauds, maladministration in office, or misappropriation of the public funds.

To oppose objectionable legislation, and to aid in procuring such as may promote the public welfare.

To advocate and promote a public service based upon character and capability only, and with a proper tenure of office.

To advocate and promote an improved and nonpartisan administration of the public schools.

To obtain a fair, honest, and equal assessment of property.

Tulane University.—Classes in drawing and a manual training-school have been established by this institution. The total number of students is 519, distributed among the schools as follows: High-school 210, college 50, law-school 26, medical school 230, university 3.

Expositions.—The World's Industrial and Cotton Centennial Exposition was formally closed on June 1. On Nov. 10 the North, Central, and South American Exposition was opened. This is practically a continuation of the Exposition of last year.

Cotton-Trade.—The cotton-trade of New Orleans for the past two years is shown below:

ITEMS.	1884–'85.	1883–'84.
Crop of the United States	5,706,165	5,713,200
Gross receipts at New Orleans	1,697,327	1,709,881
Per cent. gross receipts at New Orleans to crop of United States.	$29^7/_{10}$	$29^9/_{10}$
Transit passing through New Orleans	712,740	606,002
Per cent. of transit to gross receipts at New Orleans	$41^9/_{10}$	$35^5/_{10}$
Number bales handled in presses of New Orleans	984,587	1,103,379
Per cent. crop United States received and sold in New Orleans.	$17^2/_{10}$	$19_3/_{10}$

LUTHERANS. The statistics of the Evangelical Lutheran Church in America for 1885 show an increase of 250 pastors, 280 congregations, and 60,000 communicant members; or a net increase, according to the German Almanac, of 126 pastors, 234 congregations, and 40,806 communicant members. The figures of the various statisticians still differ, owing partly to the diversified methods employed, but chiefly to the sources of information. The following are the figures of a few of the best authorities:

AUTHORITIES.	Synods.	Ministers.	Congregations.	Membership.
"Der Lutherische Kalendar" (Allentown)	57	3,834	6,763	912,742
"Church Almanac" (Philadelphia)	56	3,762	6,770	862,831
"Evangelical Lutheran Almanac" (Columbus)	53	4,018	6,864	889,727
"Lutheran Almanac" (Philadelphia)	58	3,864	7,045	911,267
"Stall's Lutheran Year-Book" (Lancaster)	57	3.717	7,037	893,202

There are at present under the supervision of Lutherans, twenty-one theological seminaries, twenty-four colleges, twenty-nine academies and high-schools, eleven young ladies' seminaries, and forty-seven benevolent institutions. The periodicals include 39 English, 55 German, 21 Norwegian, 8 Swedish, 1 Finnish, and 1 Icelandic. A summary of the statistics of the various synods and general bodies composing the Evangelical Lutheran Church in America is given in the table on page 551. Only two of the general bodies held conventions during the year.

General Synod (North).—This body held its thirty-second Biennial Convention at Harrisburg, Pa., May 27 to June 2, 1885. There were present at this convention 178 clerical and lay delegates, representing 23 district synods and 878 ministers, 1,460 congregations, and 134,840 communicant members. This body has under its control five theological seminaries or departments: At Gettysburg, Pa., 41 students; Hartwick, N. Y., 3; Springfield, O., 9; Selinsgrove, Pa., 12; Chicago, Ill., 4; three colleges—at Gettysburg, Springfield, and Carthage; four academies; four young ladies' seminaries; and one orphans' home, at Loysville, Pa.

Rev. M. Rhodes, D. D., of St. Louis, Mo., was elected president. The attention of the Synod was given principally to the consideration of its benevolent enterprises and boards. The Board of Foreign Missions reported receipts for two years amounting to $60,576.72, to which is to be added a balance on hand of $7,161.10. The expenditures for the same period were $60,814.16. The contributions of the 331 woman's missionary societies, with a membership of 9,525, amounted to $18,825.98, of which $9,602.50 was received by the Board of Foreign Missions for use in the Guntur and Muhlenberg Missions. The ladies' societies support two zenana workers in the India Mission. The Children's Foreign Missionary Society contributed $4,837.64. The missionary operations at and around Guntur, India, and Muhlenberg, Africa, were reported as being in a flourishing condition, the former embracing 7 *taluks* or townships, 296 villages containing Christians, 75 chapels, 4 ordained and 7 unordained missionaries, 2 native pastors, 1 evangelist, 16 catechists, 67 village preachers, 2 zenana missionaries, 2 native helpers in zenana work, 6 Bible and tract colporteurs, 8,518 baptized and 3,359 communicant members, 6,127 Sunday-school pupils, and 2,781 pupils in the other schools, with 147 teachers. The African Mission reported 2 ordained and 1 unordained missionaries, 127 pupils in schools, and 81 communicant members. The General Synod (South) has for the past few years coöperated with the General Synod in its missionary operations, and has lately sent a man to the Guntur station.

The Board of Home Missions reported receipts for two years amounting to $46,984; expenditures, $42,638.11. The number of separate missions that received aid from the board was 87, and the number of missionaries employed 97. These missions are distributed in Canada, New York, Connecticut, Pennsylvania, Maryland, District of Columbia, Ohio, Indiana, Michigan, Illinois, Kentucky, Tennessee, Missouri, Iowa, Minnesota, Dakota, Nebraska, Kansas, Colorado, and Wyoming. Thirty eight new missionaries were added, twenty-one of them being in entirely new fields. The great want for this growing work was men for the ministry. The Board of Church Extension reported receipts amounting to $77,806.92. The assets of the board are $105,505.81, and its liabilities $44,867.61. The Board of Publication reported net assets amounting to $68,083.91, and the sales for the year ending March 31, 1885, amounted to $47,250.60. During the past two years twenty-eight new publications have been issued. The board was instructed to secure at the earliest practicable time the preparation and publication of a "Cyclopædia of Lutheranism," and to encourage the preparation of commentaries by Lutheran authors on the various books of Scripture for the use of Sunday-school teachers, as well as of historical works and literature in general, for the promotion of general information respecting the Lutheran Church; also to publish a concise popular history of the General Synod, to be issued in German, Swedish, Danish, Norwegian, and English. The Parent Education Society reported the receipt of $2,880.80, and the expenditure of $2,559.50. The Historical Society reported that arrangements were effected by which the society expected soon to possess an almost complete array of American Lutheran literature.

The committee on common order of service for English-speaking Lutherans reported, through Rev. G. U. Wenner, orders for morning and communion service and an evening service. The report was received, and after thorough discussion the following resolution was unanimously adopted:

> That the General Synod has learned with great satisfaction that its committee of conference with the committees of the General Council and General Synod (South) for the arrangement of a common order of service for English-speaking Lutherans, has reached a harmonious and unanimous agreement with those committees; that it approves of the work of the committee submitted to us, and that the committee be continued with instructions to finish the details, and also be authorized to publish the completed service for the use of the churches, provided the other two bodies adopt it.

SYNODS.	Organized.	Ministers.	Congregations.	Members.
Maryland	1820	75	128	14,543
West Pennsylvania	1825	77	119	19,503
Hartwick (N. Y.)	1831	33	32	4,226
East Ohio	1836	40	68	8,405
Franckean (N. Y.)	1838	25	86	2,750
Allegheny (Pa)	1842	62	147	12,959
East Pennsylvania	1842	70	114	14,359
Miami (Ohio)	1845	25	38	3,266
Wittenberg (Ohio)	1847	38	76	5,520
Olive Branch (Ind.)	1847	18	34	2,548
Northern Illinois	1851	30	47	2,412
Central Pennsylvania	1855	41	84	7,627
Iowa	1855	24	30	1,235
Northern Indiana	1855	36	81	3,080
Southern Illinois	1857	12	20	1,000
Pittsburg (Second)	1866	27	78	4,684
Central Illinois	1867	24	30	1,716
Susquehanna (Pa.)	1867	38	78	7,502
Kansas	1868	44	43	1,449
New York and New Jersey	1871	46	45	11,637
Nebraska	1873	47	50	3,113
Wartburg	1876	37	34	4,491
Middle Tennessee	1878	15	19	899
I. General Synod (North)	1821	894	1,431	133,924
North Carolina	1803	30	45	4,039
South Carolina	1824	35	60	6,033
Virginia	1830	29	61	4,300
Southwestern Virginia	1842	29	44	2,644
Mississippi	1855	8	11	400
Georgia	1860	9	16	1,171
II. General Synod (South)	1863	140	237	18,587
Ministerium of Pennsylvania	1748	233	392	92,542
Ministerium of New York	1786	81	87	25,930
Pittsburg (First)	1845	88	167	16,189
Texas	1851	32	53	5,500
English District of Ohio	1857	31	64	6,999
Michigan	1860	31	63	6,759
Swedish Augustana	1860	212	464	59,448
Holston (Tenn.)	1861	14	24	1,566
Canada	1861	23	60	5,589
Indiana	1871	16	31	2,258
		761	1,405	222,780
Not in full connection with General Council:				
German Iowa Synod	1854	189	337	27,191
Norwegian Augustana	1860	26	60	5,500
III. General Council	1867	976	1,802	255,471
Wisconsin Synod	1845	112	188	53,489
Missouri, Ohio, and other States (eleven districts)	1847	857	1,198	205.500
Minnesota	1860	40	70	8,600
English Conference of Missouri	1872	7	7	500
Concordia of Pennsylvania and other States	1882	14	19	5,170
IV. Synodical Conference	1872	1,030	1,482	273,259
Joint Synod of Ohio	1818	250	428	63,300
Tennessee	1820	29	95	8,135
Buffalo (N. Y.)	1845	23	34	5.000
Maryland Synod (German)	....	7	10	1,200
Norwegian Lutheran Church	1853	213	571	77,777
Conference of Norwegian-Danish Lutheran Church	1870	91	349	27,027
Danish Church in America	1872	38	120	5,500
German Augsburg	1875	43	52	11,000
Hauge's Norwegian Synod in America	1876	38	123	8,300
Danish Evangelical Lutheran Church Society in America	1884	10	34	700
Society of Icelanders in America	1885	3	9	500
Without synodical connection	....	35	40	10,000
Independent Synods	....	780	1,865	218.439
Grand total	....	3,820	6,817	899,680

General Synod (South).—This body held its fourteenth Biennial Convention in 1884 (see "Annual Cyclopædia" for 1884). The next convention will be held at Roanoke, Va., in May, 1886. The General Synod (South) embraces six district synods and 140 ministers, 237 congregations, and 18,587 communicant members. There are within the borders of this body one theological seminary at Newberry, S. C. (4 students); four colleges—Salem, Va., Mount Pleasant, N. C., Newberry, S. C., and Dallas, N. C.; five academies, and five young ladies' seminaries.

General Council.—The General Council of the Evangelical Lutheran Church in North America held its eighteenth Annual Convention in St. John's German Evangelical Lutheran Church, Philadelphia, Nov. 15–27, 1885. Representatives were present from all the synods in connection with the Council, except the Texas, Holston, Tenn., and German Iowa. The Council is composed of ten synods in regular connection, and two synods sending delegates with privilege of debate, but not of voting. These twelve synods number 976 ministers, 1,802 congregations, and 255,471 communicant members. There are within the bounds of the Council three theological seminaries, at Philadelphia, 63 students; Rock Island, Ill., 37; and Mendota, Ill., 37; five colleges—Allentown, Greenville, Pa., Rock Island, Mendota, Ill., and St. Peter, Minn.; six academies; fourteen orphans' homes; one asylum for aged; six hospitals; one deaconess institute in Philadelphia, and one immigrant mission.

Prof. A. Spaeth, D. D., was re-elected president. The Committee for Foreign Missions reported a prosperous condition of the mission-field in the presidency of Madras, among the Telugus, India. During the year, the senior missionary, Rev. H. C. Schmidt, was in America, while Rev. Poulsen was laboring at Samulcotta, and Rev. Dietrich had charge of the schools and congregation at Rajahmundry, the principal station, and a general oversight of the entire mission. During the year, Rev. William Groenning, of Schleswig, Germany, son of a former distinguished missionary, was called to take charge of the mission-schools. There are in this mission five ordained missionaries, two wives of missionaries, two native ordained pastors, five evangelists and catechists, and sixty-one teachers. In the mission there are 59 schools, with 1,104 pupils. The mission numbers 842 communicant and 1,705 baptized members. The expenses for the year were $15,023.51.

The home-mission work of the Council is intrusted to three committees—English, German, and Swedish. In noting this part of the General Council's work it must be said that each of the district synods is engaged in mission-work within its own territory, and that the English and German Committees only attend to such work as lies beyond the bounds and ability of these synods. The Swedish Committee, however, reports the work of the Swedish Augustana Synod. The English Committee reported fifteen stations, with seven missionaries, in Illinois, Ohio, Minnesota, and Dakota. Their expenditures were $4,106.93. The German Committee reported that their work, like that of the English Committee, was increasing so rapidly, the field extending so enormously, and the demands on the committee were so many, that the means at hand were totally insufficient. The first seven candidates from the institution at Kropp, Germany, arrived during the year, and places were assigned them. The contributions for the German work amounted to $5,923.07, of which the committee expended $5,792.09. At the same time the report of the Proseminary at Rochester, N. Y., was submitted, showing that institution to be doing a great and important work; also a request from Lutheran pastors in Bavaria, Germany, desiring to establish an institution for the preparation of young men to enter the Philadelphia Seminary and engage in the German work in America.

The Swedish Committee reported a large number of missions in nearly all the Western States and Territories and in the New England States. The contributions for this work, during the year, amounted to $11,015.82. The report also called attention to the fact that aid is required from the Council to establish English missions among the Swedes. In prosecuting their work, the three committees expended, during the year, $20,914.84. This, together with the expenses of carrying on the work in India, makes a total for missions of $35,938.35.

Among other matters of importance brought before the Council were reports on ministerial acts and common order of service for English-speaking Lutherans. The common order of service, after a thorough discussion, was unanimously adopted, as far as the joint committee had prepared it, and the committee was continued, with instruction to complete the work as soon as possible. Of the ministerial acts, the forms for infant and adult baptism, confirmation, and confession, were adopted.

The work of the Ministerium of Pennsylvania of erecting larger buildings in West Philadelphia for the Theological Seminary was heartily approved, and the synods were urged to do all in their power to secure the speedy completion of this work. A happy incident connected with this convention of the Council was the choral service under the title of the "Church Year," given by Lutheran choirs, in the church of the Holy Communion, Broad and Arch Streets. The ancient vesper service of the Church, with its antiphons, psalmody, lessons, and canticles, formed the main part of the service, short Scripture lessons connecting the different sections and announcing the theme for each season of the church year, from Advent to the last things in the last Sundays after Trinity. The musical selections used belong partly to ante-Reformation times and partly to the sixteenth and seventeenth centuries.

Synodical Conference.—This body held its tenth Biennial Convention in 1884. (See "Annual Cyclopædia" for 1884.) The next convention will be held in Detroit, Mich., August, 1886. This body embraces five district synods, and 1,030 ministers, 1,482 congregations, and 273,259 communicant members. It has under its control three theological seminaries at St. Louis, Mo., 99 students; Milwaukee, Wis., and Springfield, Ill.; five colleges, six academies, and twelve benevolent institutions.

Order of Service.—In 1879 the General Synod (South) proposed to the General Council the propriety of the preparation of an order of public worship for the use of all English-speaking Lutherans. The General Council consented to co-operate in this work, "provided that the rule which shall decide all questions arising in its preparation shall be, the common consent of the pure Lutheran liturgies of the sixteenth century, and, when there is not an entire agreement among them, the consent of the largest number of those of the greatest weight." The General Synod (North) was also invited to co-operate. Committees were appointed by the three bodies to prepare suitable orders of service. The representatives of the three committees held a meeting in Charleston, S. C., April 17 to 21, 1884, and "unanimously agreed in the determination of the constituent parts, and the order of a full normal Lutheran service." The joint committee met in the Philadelphia Seminary, May 12 and 13, 1885, to consider and take final action on the general principles agreed upon and the order outlined a year ago.

> The result of the labors of the joint committee must be reported to the general bodies represented in it. No order of service can be made binding on the congregations, and no part of a service should be used any longer than it serves to edification. The full Lutheran service shall be furnished, with all its provisions, for all who wish to use it. If at any time or place the use of the full service is not desired, it is in entire conformity with good Lutheran usage that a simpler service may be provided and used, in which only the principal parts of the service, in their order, are contained.
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> The following was agreed to be the order of the various parts of the morning service, by the general consent of the largest number and most influential of the Lutheran liturgies of the sixteenth century, to which the committee propose various additions as being suited to the wants of the Church in our time. The titles in italics indicate the normal Lutheran service; those in Roman the additions proposed by the committee: Hymn of Invocation. The Invocation: In the name of the Father, etc. The Confession of Sins and Absolution. *Introit. Kyrie. Gloria in Excelsis*, or hymn. *Collect. Epistle. Alleluia*, or hymn. *Gospel. Creed.* Hymn. *Sermon. General Prayer.* Hymn. *Preface. Sanctus and Hosanna. Exhortation to Communicants. Words of Institution. Lord's Prayer. Agnus Dei. Distribution. Collect of Thanksgiving. Benediction.* For the evening service the old vesper service was adopted. The outline is as follows: Hymn of invocation, or other hymn. Versicle. Psalm. Scripture lessons. Sermon. Hymn. Canticle. Prayer. Benedicamus, or hymn. Benediction.

Both the General Council and the General Synod (North) have adopted the report of the joint committee as far as it is completed. The General Synod (South) has not yet taken action with reference to the matter, not having a meeting in 1885.

Efforts at Union.—In the latter part of 1884 a proposition was made by members of the Lutheran Church in the South to hold a Church Diet for the purpose of inaugurating a more general organic union among the Lutheran synods in the South, properly based on the confessions of the Evangelical Lutheran Church. The proposition was very generally favored, and a convention was called to meet in Salisbury, N. C., Nov. 12. The North Carolina, Tennessee, South Carolina, Virginia, Southwestern Virginia, Georgia, and Holston Synods sent delegates. There were twenty-three clerical and nine lay delegates and five commissioners. The Rev. A. J. Brown, D. D., of the Holston (Tenn.) Synod, was elected president. The result of the labors of the committee appointed to formulate a basis of union was the following, which was finally adopted without a dissenting voice:

> *Confessional Basis.*—1. The Holy Scriptures, the inspired writings of the Old and New Testaments, the only standard of doctrine and church discipline. 2. As a true and faithful exhibition of the doctrines of the Holy Scriptures in regard to matters of faith and practice, the three ancient symbols, the Apostolic, the Nicene, and the Athanasian Creeds, and the Unaltered Augsburg Confession of Faith. Also the other symbolical books of the Evangelical Lutheran Church, viz.: the Apology, the Smalcald Articles, the Smaller and Larger Catechisms of Luther, and the Formula of Concord, consisting of the Epitome and Full Declaration, as they are set forth, defined, and published in the Christian Book of Concord, or the symbolical books of the Evangelical Lutheran Church, published in 1580, as true and scriptural developments of the doctrines taught in the Augsburg Confession, and in perfect harmony of one and the same pure scriptural faith.
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> *Object and Aim.*—Outward expression of scriptural unity of the synods concerned; mutual strengthening in faith and confession; unification of all Lutherans in one orthodox faith, and mutual co-operation in the promotion of the more general interests of the Church; as books of worship, liturgies, theological seminaries, charitable institutions, immigrant missions, foreign missions, and important home-missionary operations.
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> *Powers.*—Its powers shall be only of an advisory and recommendatory character in all matters, except such as pertain to the general interests or operations of the Church, as already indicated. In regard to these, it shall be invested with such powers as the synods composing it may delegate to it. In its operations it shall not interfere with the legitimate work of the synods in its connections. Its constitution shall contain nothing that is in conflict with this basis of union.

The Diet resolved to submit this to the respective district synods for ratification. The Diet also adopted an outline of a constitution by which the new body should be governed, in case the district synods should be sufficiently unanimous in effecting a general organization. All the synods represented at the Diet, except the Georgia Synod, have ratified the "Basis of Union."

The several Norwegian Synods have also held several conventions during the year, in the interest of a closer union; but no organization has yet been effected. The four Norwegian Synods interested in this movement number 368 ministers, 1,097 congregations, and 117,154 communicant members.

The Lutheran Church in all portions of the world numbers, according to the latest statistics, 25,452 ministers, 33,693 congregations, and 47,451,136 members.

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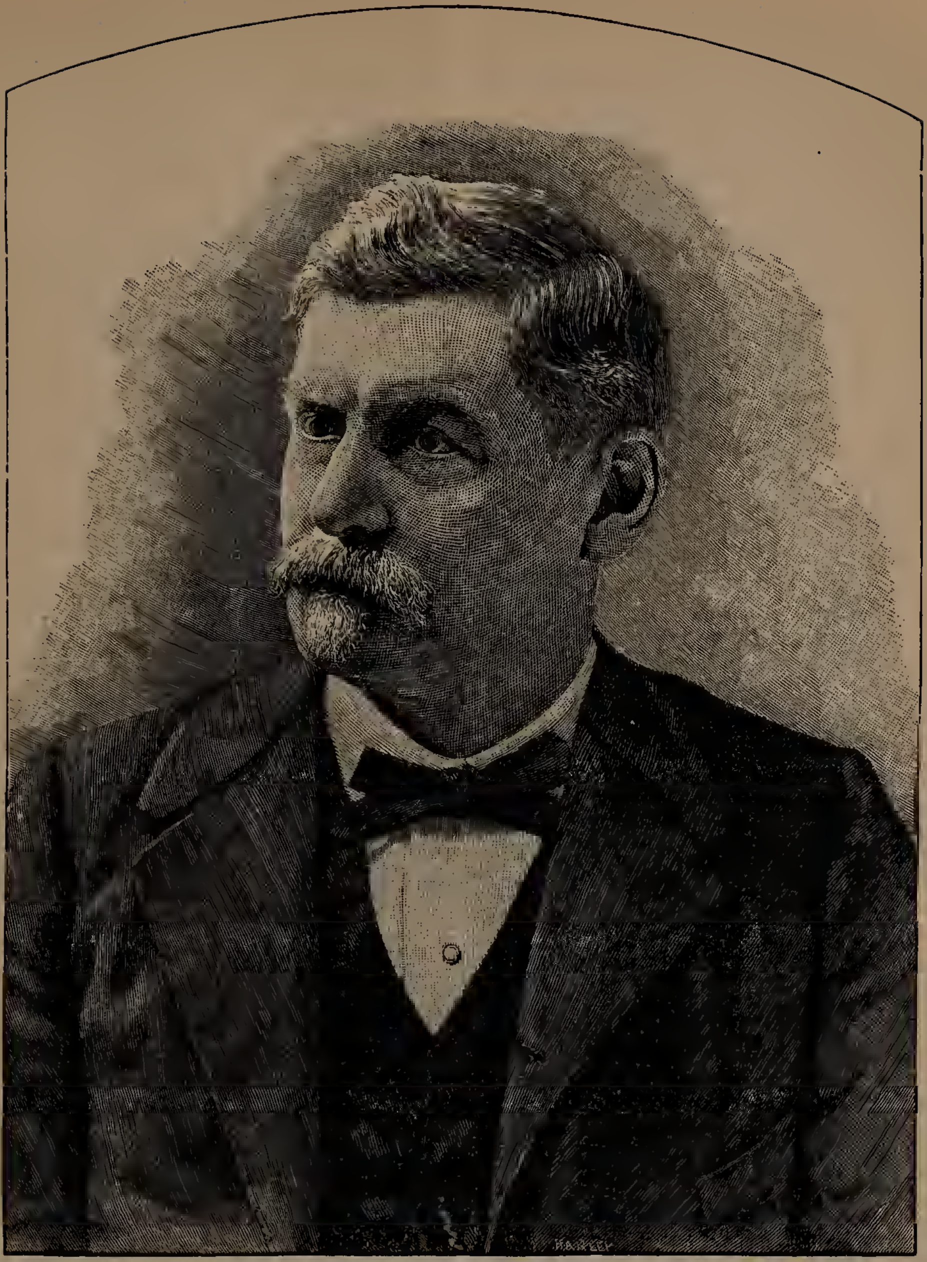
McCLELLAN, GEORGE BRINTON, an American soldier, born in Philadelphia, Dec. 3, 1826; died in Orange, N. J., Oct. 29, 1885. His father was an eminent surgeon, and one of the founders of Jefferson Medical College. He was educated at home and in private schools until 1840, when he entered the University of Pennsylvania. In 1842 he entered the Military Academy at West Point, and was graduated in 1846, standing second in his class, which was one of the largest that ever left the Academy, and which numbered among its members Stonewall Jackson, Pickett, Crouch, Reno, Foster, Maury, and Stoneman. He stood first in geology and engineering. He was assigned to duty as brevet second lieutenant of engineers; but the Mexican War was in progress, and he was ordered to aid in organizing a company of sappers and miners.

He sailed for the seat of war with this command in September, 1846. At the siege of Vera Cruz he was active in engineering work under Capt. Robert E. Lee, and was highly commended in official reports. At Cerro Gordo he cleared away the obstacles from in front of Pillow's assaulting column; at Mesicalcingo he advanced so eagerly in making a reconnaissance that only the prompt action of his comrades saved him from capture; at Contreras, while he was posting batteries, two horses were killed under him, and he was finally knocked down by a grape-shot that struck the hilt of his sword. At the San Cosme gate, in the assault on the city of Mexico, he made his way with his miners through the walls of a block of adobe houses to the rear of a battery that commanded the gate, and in the eagerness of his advance fell into a ditch and narrowly escaped drowning. He was breveted first lieutenant, Aug. 20, 1847, for gallant and meritorious conduct at Contreras, and afterward captain for gallant and meritorious conduct at Molino del Rey. The latter honor he declined, as he was not present at the action, but he accepted the same brevet, Sept. 13, 1847, for gallant and meritorious conduct in the capture of Mexico. He was made second lieutenant, April 24, 1847.

He was ordered to West Point, June 22, 1848, and became director in field labors and instructor in the bayonet exercise. While at the Academy he prepared a lecture on Napoleon's campaign of 1812, furnished various estimates for the chief engineer, and in 1849–'50 adapted from the French of Gomard a "Manual of Bayonet Exercise," which was made part of the system of instruction, on the recommendation of Gen. Scott. In 1851–'52 he was assistant engineer in the construction of Fort Delaware. Early in 1852 he accompanied Capt. R. B. Marcy on an expedition to the Red river. In September of the same year he engaged as senior engineer in surveying the rivers and harbors of Texas. In the spring of 1853 he reported to Gov. Isaac L. Stevens, of Washington Territory, who had been put in charge of the survey of the northern route for a railroad to the Pacific, and he was detailed to examine the western part of the proposed line, through the Cascade mountains to Puget Sound. His report forms part of the first volume of Government reports on the "Pacific Railroad Surveys." July 1, 1853, he was made first lieutenant. In the summer of 1854 he was sent to the West Indies on a secret mission to determine upon the best site for a government coaling-station. He chose the bay and promontory of Samana, on the northeast coast of Hayti. On his return he was engaged on special service in collecting railroad statistics for the War Department, and, having been made captain of cavalry, March 3, 1855, he was selected by the Secretary of War, Jefferson Davis, to go to Europe in 1855–'56, during the Crimean War, with Maj. Delafield of the Engineers and Maj. Mordecai of the Ordnance Department, to report on the military systems of Europe and suggest improvements in the organization of the United States Army. His report on "The Armies of Europe" was published by order of Congress in October, 1861.

On Jan. 16, 1857, he resigned his commission and became chief engineer of the Illinois Central Railroad. In the beginning of 1858 he was made vice-president of the road, and assumed general charge of its business, taking up his residence in Chicago. In 1860 he married Miss Ellen Marcy, daughter of Capt. R. B. Marcy; and in the same year he was chosen President of the Ohio and Mississippi Railroad, and removed to Cincinnati, where he lived at the outbreak of the civil war.

When hostilities began, Gov. Dennison, of Ohio, called upon him to aid in organizing the volunteers of that State. He went to Columbus at once, and entered upon the task, and on April 23, 1861, under an act of the Legislature for the appointment of officers in the State troops other than militia, he was commissioned major-general of Ohio militia volunteers. May 3, 1861, the States of Ohio, Indiana, and Illinois were erected into the Military Department of the Ohio, to which West Virginia was afterward added, and he was assigned to the command, with headquarters at Cincinnati, near which a camp of instruction, Camp Dennison, was formed. On May 14, 1861, at the request of the Governor of Ohio and on the advice of Gen. Scott, he was commissioned major-general in the regular army. The Confederate attempt to suppress the resistance of the Union people of West Virginia to the secession movement, and to break the Baltimore and Ohio Railroad, brought on the first regular campaign of the war, which was short, sharp, and decisive. Under the orders of Gen. R. E. Lee, Col. Porterfield took possession of Grafton, on the line of the railroad, and began burning bridges and destroying the road. On May 26, 1861, McClellan ordered two regiments to cross the Ohio at Wheeling, and two others at Parkersburg, both detachments to concentrate by rapid marches upon Porterfield at Grafton. That officer was warned in time to withdraw to Philippi, fifteen miles southward, but two converging columns sent after him from Grafton fell upon him, June 3, and routed his force completely. As a result of this preliminary struggle, a convention of delegates from about forty counties of Virginia met at Wheeling, June 11, repudiated the acts of the State government, and formed a provisional government, thus beginning the movement that resulted in the creation of a new State. On June 22, McClellan moved his headquarters to Parkersburg, and thence to Grafton; and about the same time the Confederate General Garnett arrived at Beverly and made arrangements for holding the passes at Laurel Hill and Rich mountain, which he described as "the gates to the Northwestern country." He placed Col. Pegram with a regiment and six guns in the pass at Rich mountain, and took position in the pass at Laurel Hill himself, with about three regiments, leaving a detachment at Beverly. McClellan pushed forward part of his force from Philippi, threatening the latter position, while he himself advanced with the rest on Rich mountain, by way of Buckhannon, aiming at Beverly, with the design of cutting off Garnett from his base at Staunton. On July 9 he reached Roaring creek, two miles from Pegram's intrenched camp. After a reconnaissance the next day, showing that a direct assault could only be made at great cost, he sent Gen. Rosecrans, July 11, at that officer's suggestion, to the crest of the mountain with a strong detachment, designing to attack the enemy in front and rear. Rosecrans, after a toilsome march, encountered a small body of the enemy on the crest of the mountain, defeated it, and then rested. Pegram, seeing the Union troops in front and rear, spiked his guns and retreated northward along the mountain to join Garnett at Laurel Hill; but that general had fallen back to Leedsville on the first news of Pegram's defeat. On July 12, McClellan pushed on to Beverly, cutting off the only line of retreat southward, compelling Garnett to turn northward toward St. George and



GEORGE BRINTON McCLELLAN.

West Union, and forcing Pegram to surrender the same night. Garnett's retreat was rapid and disorderly, and his escape was due to the slowness of the co-operating column. Pursuit ceased at Carrick's ford on Cheat river, where the Confederate general made a stand with his rear-guard and was beaten in a smart skirmish, losing his life at the close of the action. These operations, though conducted with small forces and involving no great losses, "closed a campaign, dispersed a rebel army, recovered a disputed State, and permanently pushed back the military frontier."

Success achieved so neatly and so rapidly added greatly to the professional reputation that McClellan had already won in the regular army, and on July 22, the day after the disastrous defeat at Bull Run, he was ordered to turn over his command to Rosecrans and report at Washington. He was then engaged in preparing to push a column to the Kanawha, but he reported at Washington, July 26, and was put in command of the Department of Northeastern Virginia, including Washington, and all the troops on both banks of the Potomac; which command was called, Aug. 17, the Department of the Potomac. When he reached the capital, the defenses were imperfect. There were no fortifications on the Maryland side, and nothing on the Virginia side but detached works controlling the principal roads; so that the enemy might have occupied Alexandria heights and shelled the city, or perhaps taken it by a dash of a cavalry regiment. There was nothing that could be called an army, though about 50,000 men were scattered in the neighborhood of the capital, in positions taken almost at random. The three-months' regiments were being mustered out; old regiments were disheartened by defeat, and new levies were pouring in. McClellan's first task was to render Washington safe, with a small garrison, against any ordinary attack, and this was done by the construction of a series of fortifications; his second task was the organization of a great army. He did his work well, for unlimited means were put at his disposal, and he enjoyed for a time the confidence of the Administration and the people, and had won the abiding love of the soldiers. He became the national hero, unfortunately for himself, before he had earned the right to be so; but he made good use of his popularity in spending it upon the foundations of our success. On Aug. 4 he submitted to the President a memorandum on the conduct of the war, in which a general plan of operations was suggested. He argued that the main struggle would be in Virginia, but he suggested—after West Virginia, Missouri, and Kentucky were secure—movements down the Mississippi and into Tennessee. He asked for the main army, to be under his own control, 273,000 men, and said: "I propose, with the force which I have requested, not only to drive the enemy out of Virginia and occupy Richmond, but to occupy Charleston, Savannah, Montgomery, Pensacola, Mobile, and New Orleans; in other words, to move into the heart of the enemy's country, and crush the rebellion in its very heart." In a letter to the Secretary of War, near the close of October, he urged unity of plan and the concentration of forces in Virginia. He then reported the aggregate strength of the army of the Potomac at 168,318 officers and men, with 228 guns; the force present for duty at 147,695; the effective force at 134,285; and the number disposable for an advance at 76,285. He estimated the force requisite for an advance at 208,000 men, with 488 guns.

As early as Oct. 15 the organization of the army had been completed, except the formation of army corps, which was postponed until the opening of the campaign; and this work was so admirably done that no subsequent disaster could undo it. Before that time the impatience of the country for an advance of the main army, which had precipitated the Bull Run campaign, began to make itself felt again; and the only serious combat that took place along McClellan's lines, the disaster at Ball's Bluff, Oct. 21, seriously affected his popularity, though he was not directly responsible for it. On Nov. 1, 1861, on the retirement of Gen. Scott, he was made General-in-Chief of the Union armies. Besides exercising supervision over the military movements in the West, he arranged the expedition under Burnside for the capture of Roanoke Island and Newbern, and that under Butler for the capture of New Orleans. His letter of instructions to the former, Jan. 7, 1862, indicates Wilmington and Raleigh as possible objectives; his letter to the latter, Feb. 23, 1862, indicates the purpose of pushing up the Mississippi to meet the advance of the Northwestern army, and the subsequent reduction of Mobile, Pensacola, and Galveston.

During the brief period when he was General-in-Chief, the campaign of Forts Henry and Donelson was carried out, and the campaigns against New Madrid and Corinth begun. But in the mean while the principal Confederate army lay at Manassas, apparently besieging the national capital, and the pressure for a forward movement of the Army of the Potomac became too powerful to be resisted with impunity. McClellan had delayed so long in collecting military resources that certain moral forces necessary to success had failed him. The President's faith in him was shaken; popular confidence was impaired; the active jealousy of many political leaders, displeased with his reticence and suspicious of his opinions, was roused, and he was destined to begin the campaign strong only in the discipline, love, and loyalty of the army he had formed. On Dec. 1, 1861, the President proposed a plan for an advance by which 50,000 men were to menace the Confederate position at Manassas, while 50,000 were to execute a flank movement by Occoquan creek. On Dec. 10 McClellan hinted in reply that he had a plan in his mind that would probably prove a surprise to friends and foes; but about the middle of that month he fell sick and was confined to his house until the middle of January, 1862. During this time the President had called into conference Generals McDowell and Franklin, and declared that "if something was not done soon, the bottom would be out of the whole affair." McClellan, on his recovery, "found that excessive anxiety for an immediate movement of the Army of the Potomac had taken possession of the minds of the Administration," and he submitted to the Secretary of War, and subsequently to the President, his plan for an attack on Richmond by way of the lower Chesapeake, which the latter disapproved. On Jan. 27, 1862, the President issued his first general war order, commanding an advance of all the Union forces Feb. 22; and on Jan. 31 he issued his first special war order, commanding the Army of the Potomac to move against the railroad southwest of Manassas on or before Feb. 22. McClellan submitted an elaborate argument against this order, Feb. 3. He recalled what he had done in organizing the army and fortifying the capital, and urged the necessity of a general and harmonious plan of action. He set Richmond and Nashville as his immediate objective points, East and West, and described his general design as follows:

> After a successful battle our position would be—Burnside forming our left; Norfolk held securely; our center connecting Burnside with Buell, both by Raleigh and Lynchburg; Buell in Eastern Tennessee and northern Alabama; Halleck at Nashville and Memphis.

The next movement would be to connect with Sherman on the left by reducing Wilmington and Charleston, to advance our center into South Carolina and Georgia; to push Buell either toward Montgomery or to unite with the main army in Georgia; to throw Halleck southward to meet the naval expedition from New Orleans.

His plan for the advance against Richmond was to move the army mainly by water to Urbana, on the lower Rappahannock, a point neither occupied nor observed by the enemy; then to push on to West Point, at the head of York river, only one march distant, thus securing a base within two days' march of the Confederate capital. "A rapid movement from Urbana," he said, "would probably cut off Magruder on the Peninsula, and enable us to occupy Richmond before it could be strongly re-enforced. Should we fail in that, we could, with the co-operation of the navy, cross the James and throw ourselves in rear of Richmond, thus forcing the enemy to come out and attack us, for his position would be untenable with us on the southern bank of the river." As a less desirable plan, he suggested an advance along the Peninsula, between the James and York rivers, with Fortress Monroe as a base. He set the force requisite for an advance at from 110,000 to 140,000 men. From the beginning he had no intention of attacking the Confederates in their position at Manassas, and, while the country supposed him afraid to attempt to drive them out, he was really anxious that they should stay there.

The President, though not formally, withdrew his special order for an advance on Manassas, and there were various unsatisfactory conferences over the plan of campaign. Finally, March 8, after a council of generals of division had approved of the Urbana route by a vote of eight to four, the President issued his second general war order, dividing the army into corps and appointing corps commanders, and his third general war order, providing that no change of base should be made by the Army of the Potomac, "without leaving in and about Washington such a force as, in the opinion of the General-in-Chief and the commanders of army corps, shall leave the city entirely secure," and imposing other conditions in regard to clearing the lower Potomac of Confederate batteries before moving by the lower Chesapeake. The latter order was issued without McClellan's knowledge, and put him under the check of the corps commanders, only one of whom had favored the movement by way of Urbana. On March 9 the Confederates evacuated Manassas, having received direct intelligence of McClellan's plans, or having inferred their character from the preparations on foot. The army advanced and took possession of the works, and the subsequent campaign therefore appeared in the public eyes as the consequence rather than the cause of the Confederate retreat. As the Confederate army took up a position on the south bank of the Rappahannock, the plan for an advance by way of Urbana had to be given up, and the movement from Fortress Monroe as a base was determined upon, though the navy, which had merely beaten off the ram Merrimac, March 9, could not control the James river at that time. On March 11 the President issued a war order relieving McClellan from general command, but retaining him in command of the Department of the Potomac. On March 13 a council of war approved of the plan for the Peninsular campaign unanimously, with certain provisos, the chief of which were the co-operation of the navy in York river, and the covering of Washington with a sufficient force. The same day the President approved of the plan, with the condition that precautions should be taken to prevent the reappearance of the enemy at Manassas, and that Washington should be left perfectly secure. On March 19 McClellan submitted more in detail his plan for an advance, insisting upon the necessity of naval co-operation, especially in the attack on Yorktown. On March 31 the President, with much reluctance, but yielding to political pressure, transferred Blenker's division of 10,000 men from the Army of the Potomac to the Mountain Department, to give importance to Fremont's command.

The embarkation of the army began on March 17, and McClellan left Washington April 1 and reached Fortress Monroe April 2. On the former day he made a report of the forces left available for the defense of Washington, which he estimated at 73,436 men. This estimate included not only the garrison of about 20,000 troops in the forts, but all troops stationed or operating within supporting distance of the city. This force was not considered sufficient by the President, and his opinion was sustained by a report from Gen. Hitchcock and Adjutant-Gen. Thomas, who made a special examination of the subject. Out of this difference of opinion came the chief disasters of the campaign, and the historical estimate of McClellan will depend greatly on the view taken of it. Before he left the capital, Fortress Monroe was placed under his command. On April 3 he was notified that he was not to command there or to detach troops from that post, so that his base was left outside of his control. On April 4 his department was narrowed so as to cover only that part of Virginia north of James river and east of the Fredericksburg and Richmond Railroad, exclusive of territory within sixty miles of Fortress Monroe. The same day McDowell's corps, nearly a third of his force, which had not yet joined him, was withdrawn from his army, and that general was ordered to report to the Secretary of War. Of this order McClellan said: "To me the blow was most discouraging. It frustrated all my plans for impending operations; it fell when I was too deeply committed to withdraw; it left me incapable of continuing operations which had begun; it compelled the adoption of another, a different, and less effective plan of campaign; it made rapid and brilliant operations impossible; it was a fatal error."

On April 5 the Army of the Potomac, which had begun its advance up the Peninsula the previous day, was brought to a stop before the enemy's fortified position from Warwick creek to Yorktown. The position was at first held by Magruder with about 15,000 men; but he was afterward strengthened by the main Confederate army under Gen. Joseph E. Johnston. On April 7 McClellan wrote to the Secretary of War, protesting against McDowell's withdrawal. He had depended upon the co-operation of the naval commander in an attack upon Yorktown; but the naval commander could do nothing to carry that place. He had also depended upon turning the Confederate position at Gloucester Point across York river by the movement of McDowell's corps, and then rendering the Peninsula untenable for the Confederates by the advance of that force up the left bank of the river to West Point; but McDowell's troops were beyond his control, and, in his judgment, nothing remained but to begin what is known as the siege of Yorktown, though it was not strictly a siege. As it progressed, Franklin's division of McDowell's corps was sent to aid in it by an attack on Gloucester Point. On May 3 the Confederates abandoned their position, having blocked the advance of the Army of the Potomac for nearly a month; and on May 4 McClellan pushed on his troops in pursuit, and the battle of Williamsburg was fought May 5, a fierce and successful but scrambling fight, managed mainly by two of the corps commanders. McClellan sent four divisions of his army from Yorktown to West Point by water, and moved the rest by land along the Peninsula. On May 7 the advance divisions repelled a sharp attack near West Point. May 16 headquarters were at White House, on Pamunkey river, and May 22 at Cold Harbor. On May 20 the advance of the army had reached the Chickahominy, and the work of bridging that stream began. On May 26 the railroad from White House, the new base, to the Chickahominy was finished. McClellan had written to the Secretary of War, May 10, urging the necessity of re-enforcements, and asserting that the decisive struggle of the war would be for Richmond. On May 14 he appealed directly to the President in the same strain. The Secretary of War, May 17, ordered McDowell, then stationed at Fredericksburg, to advance and co-operate with the attack on Richmond, and on May 18 McClellan was directed to prepare to connect his right wing with McDowell's left. McClellan wished to have all re-enforcements sent by water, and aimed at making the James river his base of operations as soon as the Union navy could dominate that stream; but this order determined his position along the Chickahominy. On May 21 he telegraphed, asking about his authority over McDowell's command after it should join him, as the departments were so divided that part of his objective, the city of Richmond itself, lay outside of the Department of the Potomac. On May 24, in the forenoon, the President sent word that McDowell, re-enforced by Shields, would march for Richmond on the 26th; but in the afternoon he telegraphed that this movement would have to be suspended, that McDowell's forces might be diverted against Jackson, who had advanced up the Valley. On May 25 the President sent details in regard to Jackson's movement, and said, "I think the time is near when you must either attack Richmond or give up the job and come to the defense of Washington." The same day McClellan answered, "The object of the movement is probably to prevent re-enforcements being sent to me." He added that two of his army corps were across the Chickahominy, within six miles of Richmond. May 27 McClellan cleared his right wing by the brilliant combat at Hanover Court-House, and so opened the way for re-enforcements from Fredericksburg whenever it should be thought safe to send them. In announcing this success, he repeated his assurance that the enemy's plans were to concentrate to defend their capital, and the President replied that the indications were all the other way. The Army of the Potomac then lay on the north and south banks of the swampy Chickahominy, across which eleven bridges had been built with great labor. On May 31 Johnston, the Confederate general, made an attack upon the Federal advance at Fair Oaks and Seven Pines, with the design of destroying the two corps on the right or south bank of the river; but the attempt was foiled in a furious battle of two days. The Chickahominy had been so swollen by continuous rains that it was with difficulty re-enforcements were got over and communication between the parts of the army preserved. The advance remained about five miles from Richmond.

On June 1 McClellan's command was extended over Fortress Monroe, and on June 2 the Secretary of War sent word that McDowell would be at his service as soon as Jackson was disposed of. In a letter written June 7, the general described the Chickahominy bottoms as a great bog, but promised "to move forward and take Richmond" the moment re-enforcements then on the way should join him and the condition of the ground permit of an advance. He was strengthened by McCall's division of McDowell's troops, June 13 and 14, and was promised the rest in due time. As early as June 11, Lee, who had succeeded Johnston, wounded at Fair Oaks, in command of the Confederate army at Richmond, began to arrange for the secret withdrawal of Stonewall Jackson from the Valley for a combined attack upon the Army of the Potomac. As early as June 18 McClellan began to arrange for a probable change of base from White House on the Pamunkey to Harrison's Landing on the James, as he was gradually massing his whole force on the south bank of the Chickahominy, and found the maintenance of the line to White House difficult and useless. On June 16 Lee wrote to Jackson, "Unless McClellan can be driven out of his intrenchments, he will move by positions, under cover of his heavy guns, within shelling distance of Richmond." McClellan had set June 26 as the day for an advance; but on June 25, Jackson, coming from the Valley, began to drive in his pickets, threatening his right and rear on the left or north bank of the Chickahominy. The same day the Secretary of War telegraphed that neither Banks, Fremont, nor McDowell, knew anything about Jackson's position or purposes, and that possibly his destination might be Richmond. McClellan sent word to Washington that the crisis which he had anticipated so long and tried so earnestly to prevent had come, and warned the authorities not to be discouraged if his communications were cut off. "The case," he said, "is perhaps a difficult one, but I shall resort to desperate measures, and will do my best to out-manœuvre, out-wit, and out-fight the enemy." This hinted at the retreat to the James, which was determined upon at the close of the next day. Lee, leaving 25,000 men in front of the main body of the Army of the Potomac before Richmond, threw the mass of his forces, re-enforced by Jackson's army, on the single corps still holding the north bank of the Chickahominy and the line of communication with White House; McClellan, abandoning his old base on the Pamunkey, set his vast trains in motion for the new base on the James, and retreated almost directly southward. In this movement occurred what are known as the Seven Days' battles: Mechanicsville or Ellison's Mills, June 26; Gaines's Mill, June 27; Savage's Station, June 29; Allen's Farm or Peach Orchard, June 29; Glendale, or White Oak Swamp, or Frazier's Farm, June 30; Malvern Hill, July 1.

Though the moral effect of victory lay with the Confederates, and was emphasized by the subsequent withdrawal of the Army of the Potomac to Washington, they were successful in but one of these battles, Gaines's Mill. After that success, Lee lost a day through his error in supposing that McClellan was retreating northward up the Peninsula, so that to some extent, if not altogether, the latter made good his pledge to out-manœuvre, out-wit, and out-fight the enemy. He has been censured for failing to throw his army, concentrated south of the Chickahominy, upon Richmond, June 28, as well as for failing to advance on that city while the battle of Gaines's Mill was in progress on the north bank, June 27. It is known that he entertained such a project, but that none of his corps commanders approved of it. He has also been censured for failure to advance after the battle of Malvern Hill, as well as for failure to advance after the battle of Fair Oaks; and these criticisms have been strengthened by facts in regard to the condition of the Confederates made known since the close of the war. From Savage's Station, June 28, McClellan sent to the Secretary of War his passionate protest against what he considered the failure of the Administration to support him properly. "If I save this army now," he said at the close, "I tell you plainly that I owe no thanks to you or to any other persons at Washington. You have done your best to sacrifice this army."

On July 3 the Army of the Potomac was in camp at Harrison's Landing, and the campaign was a failure in the eyes of the country. McClellan, with a smaller force than was subsequently put at the disposal of some of his successors, had encountered the most numerous Confederate army that ever took the field, and the greatest Confederate captains of the civil war. He had shown strategical and tactical ability of a high order, and personal qualities that gained and kept the love of his soldiers through every trial. But then, as afterward, he was misled by the secret service into grave errors as to the number of the enemy; and then, as afterward, he was too anxious to secure, before acting, every condition theoretically requisite to success, and too ready to assume a perfection of preparation on the part of the Confederate leader that was unattainable on his own. His fault as a soldier was in expecting things as they ought to be, and not taking them as he found them. Perhaps, too, he was not prodigal enough of human life and suffering for the game of war.

On July 7 he wrote to the President his well-known letter from Harrison's Landing on the conduct of the war, which was not less political than military in its scope, and put him distinctly in antagonism to the prevailing sentiment of the party in power. In this letter he urged the policy of appointing a General-in-Chief; and on July 11 Gen. Halleck was selected for that position. In the interim the President had visited the army. On June 26 the armies of Banks, Fremont, and McDowell had been consolidated into the Army of Virginia, under command of Gen. Pope. On July 11 McClellan sent the President word that he was strong enough for all defensive purposes, and on July 17 he asked for Burnside's troops to enable him to resume the offensive. July 25 and 26 Halleck visited the Army of the Potomac and conferred with McClellan as to the amount of re-enforcements necessary for an advance, and concluding that sufficient troops were not available, he ordered, Aug. 3, the withdrawal of the Army of the Potomac from its position on James river. Meanwhile McClellan, obeying a previous order, had begun a reconnaissance, which, Aug. 5, was pushed beyond Malvern Hill. On Aug. 4 he sent a dispatch, protesting against the withdrawal of his army. Among other things, he said: "All points of secondary importance elsewhere should be abandoned, and every available man brought here; a decided victory here, and the military strength of the rebellion is crushed. It matters not what partial reverses we may meet elsewhere; here is the true defense of Washington; it is here on the banks of the James that the fate of the Union should be decided." On Aug. 10 Halleck telegraphed, urging rapidity of movement, saying: "The enemy is crossing the Rapidan in large force. They are fighting Gen. Pope to-day." And on Aug. 12 McClellan replied that, if Washington was then in danger, his army could hardly arrive in time to save it. On Aug. 16 the whole Army of the Potomac was in motion on its return; and two days later McClellan telegraphed to Halleck, "Please say a kind word to my army that I can repeat to them in general orders," adding: "No one has ever said anything to cheer them but myself. Say nothing about me." No attention was paid to the request.

On Aug. 21 his headquarters were at Fortress Monroe; Aug. 24 he reported at Acquia creek, and Aug. 27 at Alexandria. He was afterward censured for not pushing forward troops from that place with sufficient promptness to succor Pope, who, during the four succeeding days, was in contact with Jackson and Lee; but he was there virtually without authority or responsibility, all of which Halleck had, and he could only act on the weak and testy dispatches which that officer was in the habit of sending, instead of orders. On the afternoon of Aug. 30 McClellan telegraphed to Halleck, "You now have every man of the Army of the Potomac within my reach." The same night he asked for permission to go to the front as a volunteer, that he might be with his own men. "If it is not deemed best," he said, "to intrust me with the command even of my own army, I simply ask to be permitted to share their fate on the battle-field." The request was put aside. The same day the War Department issued an order so defining his command as to leave him control of nothing but his own staff, a hundred men in camp at Alexandria, and a few at Fortress Monroe. He reminded Halleck of this fact, Aug. 31, in answer to some of that officer's directions about handling troops, and he was then told to take command of all the forces in the vicinity of the capital. Halleck added: "I beg of you to assist me in this crisis with your ability and experience. I am entirely tired out."

On Aug. 28, 29, and 30, and Sept. 1, occurred the battles of Gainsville, Groveton, Manassas, and Chantilly. On the day of the last action, McClellan was put in command of the defenses of Washington, and at the request of the President sent to Fitz-John Porter, under protest, the dispatch asking him to give "the fullest and most cordial co-operation to Gen. Pope," which was afterward used to discredit the loyalty of both sender and receiver. On Sept. 2 the President came to him at his house in Washington and instructed him to go out to meet the retreating army and take command of it, committing everything to his hands. Under this indefinite verbal order the Army of Virginia was merged in the Army of the Potomac, probably reversing the design with which the latter was withdrawn from James river; and it was without further formal authority that McClellan made his last campaign.

On the afternoon of Sept. 2 he rode to the front, and was received with enthusiasm by the beaten and weary but undisheartened soldiers. On Sept. 3 the enemy disappeared from the neighborhood of the capital, with the design of crossing the upper Potomac into Maryland; and the same day McClellan began his counter-movement, and by Sept. 7, when he left Washington for Rockville, the whole army, with the exception of a heavy force left under command of Banks to guard the capital, was on the march. By that time Lee had crossed the Potomac at Leesburg, and was concentrating at Frederick, Md., threatening Washington and Baltimore, but intending eventually to withdraw through the Blue Ridge into western Maryland, and threaten Pennsylvania while preserving a base in the Shenandoah Valley. He took it for granted that Martinsburg and Harper's Ferry would be evacnated, as a consequence of his movement, and when he found they were not, he issued orders, Sept. 9, sending Jackson back across the Potomac to attack Harper's Ferry from the southern side, and McLaws to attack it from the northern side, while the rest of the army was to concentrate at Boonesboro or Hagerstown. Jackson crossed into Virginia above Martinsburg, the garrison of which fell back to Harper's Ferry. McLaws moved through Pleasant Valley against Maryland Heights. On Sept. 13, while these generals were getting into position at Harper's Ferry, Lee's order of the 9th came into McClellan's hands, and he determined to advance rapidly through the mountains at Crampton's Gap and Turner's Gap, relieve Harper's Ferry, cut Lee's army in two, and beat it in detail. The conception was brilliant, and the scheme failed mainly through lack of an able or even stubborn resistance on the part of the garrison at Harper's Ferry. McClellan carried Crampton's Gap and Turner's Gap, Sept. 14, by one of the most spirited combats of the war, the battle of South Mountain; but on the morning of Sept. 15 the garrison at Harper's Ferry surrendered, and Lee moved to Sharpsburg, taking up a line with his left on the bend of the Potomac at Mercersville, and his right on Antietam creek. Jackson made a night march, crossed the Potomac once more, and joined him next day. McLaws crossed to the south of the river at Harper's Ferry and followed Jackson, reaching the main army Sept. 17. That day McClellan attacked Lee and won the great battle of Antietam; and on the night of Sept. 18 the enemy retreated across the Potomac.

McClellan was blamed for the loss of Harper's Ferry, but he had urged the abandonment of that place before he left Washington and subsequently, and was overruled. Finally, he pushed a column to its relief, and would have secured it and won a masterly position if the garrison had held out a few hours longer. He has also been censured for delay in beginning the attack at Antietam, and for failure to renew the battle, September 18th, instead of waiting for the 19th, as he resolved to do. It is true that prompter action before the battle might have had brilliant results; that he overrated the enemy's strength at all times; and that after the battle he forgot the shattered condition of Lee's forces in the consciousness of what his own had suffered. But his critics too often fail to remember that he was handling a defeated army, the battle-shaken elements of which he had gathered up two weeks before, and that he had to depend upon subordinates, not many of whom were equal to their responsibilities. No caviling about what he might have done should belittle the magnificent achievements of his brief campaign; and there is something curious in the indignation with which those who were trembling for the safety of the capital on the 2d of September saw Lee's defeated army escape across the Potomac.

As early as Sept. 21 McClellan said in a dispatch to Halleck, who had been in dread of a flank movement on Washington from the beginning of Lee's advance: "I regret that you find it necessary to couch every dispatch I have the honor to receive from you in a spirit of fault-finding, and that you have not yet found leisure to say one word in commendation of the recent achievements of this army, or even allude to them." He spent more than a month in reorganizing, reclothing, and resting his army, and in trying to get horses for an effective cavalry force, while the authorities at Washington urged an advance. A visit from the President, Oct. 1, had given him confidence that he was to have his own way; but on Oct. 6, instructions were issued to cross the Potomac and drive the enemy southward. These orders he interpreted as giving him discretion in the matter of preparation; and it was not till Oct. 25 that he considered himself ready to move. That day he addressed a letter to Halleck as General-in-Chief, in regard to the conduct of the impending campaign, and in answer that officer said: "Since you left Washington I have advised and suggested in relation to your movements, but I have given you no orders; I do not give you any now."

On Oct. 26 McClellan began the crossing of the Potomac, intending to move his army parallel with the Blue Ridge, making Warrenton the point of direction. He seized the passes into the Shenandoah Valley as he moved, and held them, so that if any strong force of the enemy remained in the north of the Valley, he might cross over in the rear of it; otherwise, his design was to strike between Culpeper Court-House and Little Washington, and either divide the forces of the enemy, or compel them to concentrate as far back as Gordonsville, leaving him free to advance on Richmond on the Fredericksburg line, or to move once more to the Peninsula. His progress after crossing the river was rapid and successful; but on the night of Nov. 7 he received orders to turn over the command of the army to Gen. Burnside, which he did at once, though its movements continued on the 8th and 9th under orders that he had already prepared.

His removal at such a time, to make way for the man that succeeded him, was an act for which there could be no justification on military grounds. It was doubtless due to some extent to the animosity of the Secretary of War and the General-in-Chief, but reasons are not wanting for supposing that it was mainly owing to the hostility of leading Republican politicians, and to political considerations. He was a Democrat, in direct antagonism to the prevailing sentiment of the party in power, and with a grievance against the Administration; his failure in the field would be as disastrous as that of another, while his success might prevent the abolition of slavery, and render probable a Democratic triumph under the lead of a military hero in the presidential election of 1864. Even under the cloud of removal, with every charge from incompetency to disloyalty made against him, and with the war still in progress, he proved a formidable presidential candidate.

In the winter of 1863 he visited Boston, and was presented with a sword. In June, 1864, he delivered the oration at the dedication of the West Point soldiers' monument. On Aug. 31, 1864, the Democratic National Convention assembled at Chicago nominated him as the candidate of the party for the presidency, by a vote of 202½ to 23½ for Thomas H. Seymour, who was regarded as the representative of the peace sentiment in the Democracy. The platform adopted by the convention was especially weak in the declaration in regard to the war, notwithstanding the nomination of a soldier; and in his letter of acceptance McClellan virtually set it aside, and spoke frankly and strongly for the prosecution of the war. He carried only three States—New Jersey, Kentucky, and Delaware—and received only 21 electoral votes to 212 cast for Lincoln; but his popular vote was 1,811,754 to 2,223,035. On election-day, Nov. 8, 1864, he resigned his commission in the army and went to reside in New York.

In the spring of 1865 he went to Europe. Returning in 1868, he took up his residence in Orange, N. J., but engaged in business as a civil engineer in the metropolis. He had supervision of the building of the Stevens battery, under the terms of its projector's will, until 1871; in 1870 he was made chief engineer of the Department of Docks in New York, and he held the place for two years. He also planned a railroad bridge across the Hudson at Poughkeepsie, which has not yet been built. He was one of many engineers who gave it as their professional opinion that an underground railway in Broadway was practicable, and he was at various times President of the New York Underground Railroad, the United States Rolling Stock Company, and the Atlantic and Great Western Railroad. In March, 1877, he was nominated by Gov. Robinson as Superintendent of Public Works in New York State, but the nomination was not confirmed. On Sept. 19, 1877, he was nominated by the Democratic party of New Jersey as its candidate for Governor, and he was elected by a vote of 97,837 to 85,094 cast for the Republican candidate. His administration was one of the best in the history of the State. Up to the day of his death he was prominent in the business and social life of the metropolis. His last formal public appearance was at the Decoration-day ceremony on the battle-field of Antietam in 1885, when he delivered the oration. He died of neuralgia of the heart, after an illness of four hours, and was buried at Trenton, N. J.

Gen. McClellan was about five feet eight inches in height, neatly and compactly built, with strong shoulders supporting a large neck and a handsome head. His eyes were gray and clear, and his complexion ruddy. He wore a mustache and imperial, sandy colored in the days of the war, but silver-gray at the time of his death. His forehead was prominent, his nose good, and his whole face indicative of a strong and fine nature. He had in a rare degree the peculiar charm that wins the love and confidence of men. It was felt by all who came into personal contact with him in the closing years of his life, not less than by the mass of his soldiers, whose rolling cheers were wont to announce his coming along the lines. Though few men of his generation were more bitterly assailed, his achievements were great, his character beautiful, and his life blameless. He was the author of no book beyond those already mentioned, and the "Report on the Organization of the Army of the Potomac, and of its Campaigns in Virginia and Maryland," published in 1864; but he contributed several papers to the magazines, and was one of the best writers among the soldiers of the civil war.

McCLOSKEY, JOHN, an American prelate, born of Irish parentage in Brooklyn, N. Y., March 20, 1810; died in New York city, Oct. 10, 1885. At the time of his birth Brooklyn was a village of fewer than 5,000 inhabitants, and New York was a city of fewer than 100,000; and there was neither Catholic priest nor Catholic church in the former, and only two priests and one church (St. Peter's) in the latter, though a second church (St. Patrick's Cathedral) was building. He was baptized by the Rev. Anthony Kohlman, who was acting as administrator of New York, which had been made a separate diocese two years before, but was then a vacant see. As a boy, the first American cardinal used to go down to the East river with his mother on Sundays, and cross in a row-boat from Brooklyn to hear mass in New York. He was a lad of delicate constitution, and an accident, in which a log rolled over him, weakened his lungs, so that even in early manhood he did not expect to live beyond forty years of age, and made the very frailness of his life the excuse for spending it lavishly in the labors of the priesthood.

His parents were well-to-do, and in 1822 he was sent to school at Mount St. Mary's College, Emmettsburg, then in charge of its founder, the Rev. John Dubois, a school-fellow of Robespierre and Camille Desmoulins, who became third Bishop of New York in 1826. Young McCloskey was of gentle disposition and studious habits, and after a seven years' preparatory and collegiate course he entered the theological department at Mount St. Mary's to prepare for the priesthood. Completing a seminary course of five years, he was ordained a priest by Bishop Dubois in the old cathedral, Jan. 12, 1834, being the eighteenth priest ordained in the Diocese of New York. The previous year the bishop had laid the corner-stone of a college and seminary at Nyack on the Hudson, and though the building was destroyed by fire and the project long delayed, it was not abandoned, and the young priest, with a view to fitting him for the presidency of such an institution, was allowed to go to Rome to continue his studies. Early in 1835 he entered the Gregorian College, where he spent two years, and he so contrived his slow return as to see something of the various countries of Europe, reaching home admirably endowed by nature and thoroughly equipped by education for the career he was to run. He was appointed, Nov. 1, 1837, pastor of St. Joseph's Church, corner of Washington place and Sixth avenue, the fifth in order of erection of the Catholic churches of the city. The parish was extensive, stretching from Bleecker street to Harlem, and the congregation was fresh from a serious quarrel with the former pastor arising out of the old trustee system; but Father McCloskey entered upon his duties with cheerful enthusiasm. He is described as at that period bright-eyed and frail-looking, but indefatigable.

Bishop Hughes, who had been made coadjutor of Bishop Dubois in 1838, and administrator of the diocese in the following year, opened St. John's College, Fordham, June 24, 1841, and appointed Father McCloskey president. He held the office about a year, and then returned to his parish-work. In 1843 Bishop Hughes asked for a coadjutor, and the Provincial Council, Nov. 23, nominated Father McCloskey for the place, and he was consecrated, March 10, 1844, Bishop of Axieren, *in partibus*, and made coadjutor of the Diocese of New York with the right of succession, being then thirty-four years old. In 1847 the new sees of Albany and Buffalo were erected, and Bishop McCloskey was transferred to the former city, May 21, 1847. There he remained as bishop for seventeen years, laboring for the develop-

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John Card. McCloskey
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ment of the Catholic Church in his diocese, but never challenging public attention or mingling in public controversy. When he went to Albany, the diocese, stretching over the northern part of the State, contained fewer than forty churches, the congregations were scattered, and there was an insufficient supply of priests. When he left the diocese it contained 113 strong churches, 8 chapels, 54 minor stations, 85 missions, 3 academies for boys, 1 for girls, 6 orphan asylums, and 6 parochial schools. He introduced various religious organizations: Ladies of the Sacred Heart, Sisters of Charity, Sisters of Mercy, Sisters of St. Joseph, those of the third order of St. Francis, Hospitalers, Jesuits, Oblates, Augustinians, Franciscans, and Capuchins; but the work that was most distinctively his own was the building of the Cathedral of the Immaculate Conception and the founding of the theological seminary at Troy. In 1850, while on his way to attend a provincial council in New York, Bishop McCloskey was injured in a railway collision near Tarrytown. The boots were torn from his feet, and his right foot was badly crushed. The $5,000 that he received from the railroad company by way of damages he turned over to the building-fund of the cathedral. In 1851 he visited Rome, where he was received with favor.

Archbishop Hughes, who had been advanced in ecclesiastical rank Oct. 3, 1850, died on Jan. 3, 1864, and Bishop McCloskey became Archbishop of New York, May 6, 1864. The province at that time included New England, New York, and New Jersey. Archbishop McCloskey was installed at St. Patrick's old cathedral, Aug. 21, 1864. He left Albany with the good-will of all classes, declining a banquet tendered him by the Governor and the State officers, but accepting a portrait of himself and an archiepiscopal cross and ring presented by the priests of the diocese. He took up the duties of his new office in an unostentatious but effective way, and the progress of the Catholic Church in New York was rapid. Many fine churches were built; the Foundling Asylum, the Institute for Deaf-Mutes at Fordham, Homes for Destitute Boys and Girls in connection with St. Stephen's and St. Ann's churches, Homes for Aged Men and Women, and orphan asylums without the city were established; and communities of various religious orders were introduced during his administration. Two labors he assumed special control of—the establishment of the Catholic Protectory in Westchester, and the building of the new cathedral, the corner-stone of which Archbishop Hughes had laid Aug. 15, 1858. Archbishop McCloskey attended the General Council of the Vatican in 1869, and served on the Committee on Discipline; he also visited Rome in 1874.

On March 15, 1875, the Pope appointed Archbishop McCloskey a cardinal priest, with the title of Sancta Maria supra Minervam, and on April 27 the ceremony of his investiture took place in the old cathedral, Archbishop Bayley, of Baltimore, a convert who had received instructions in Catholic doctrine from him while he was pastor of St. Joseph's, placing the cardinal's hat on his head. The pomp of such a ceremonial, the presence of an officer of the Pope's guard in full uniform, the general pride of the Catholic population, and, above all, the wild gossip of the newspapers about the affair, awakened some uneasiness among the Protestants of the country; but it passed away as it became clear that the cardinal, not less than the archbishop, remained a plain citizen, though a prince of the Church. He gave $10,000 to build the high altar and the episcopal throne in the new cathedral, which he dedicated on May 25, 1879.

In 1878 the cardinal was summoned to Rome to take part in the conclave held to elect a successor to Pope Pius IX. His last notable public appearance was at the golden jubilee of his ordination as a priest, held Jan. 12, 1884. On that occasion he received various addresses of congratulation and presents, the Pope sending a cameo engraved with his own portrait, and a golden chalice. The address presented by the clergy said: "Fifty years ago there were in this city but six churches; now there are sixty. There were then but twenty priests in the diocese; now there are 380. At that time there were in the whole United States only nine bishops; now there are 59. Then there was but one archbishop; now there are eleven, one of whom has been raised to the great senate of the universal church." The cardinal looked pallid and infirm, and had barely strength to take part in the ceremonial. During the last ten years of his life he was not in robust health, and as early as Oct. 1, 1880, Archbishop Corrigan was made his coadjutor at his request. The failure of his vital powers was gradual but constant; so that in the summer of 1885 he was unable to make a visit to Newport, whither he had gone once or twice for his health, and later he could not move without assistance. In the end he passed away quietly and without pain.

Cardinal McCloskey was tall and slender, but of erect and elastic bearing. His forehead was broad, and his features pleasant. His eyes were bright blue and deeply set, and his mouth mobile. His manner was quiet but impressive. He was a profound scholar, especially well versed in things appertaining to his calling, and was an effective preacher, making careful preparation for his sermons, and yet especially happy where no set effort was required. He had courage unaccompanied by any aggressive propensity. On one occasion, when he was pastor of St. Joseph's, there was a cry of fire, and a panic broke out in the congregation while he was administering communion; but he stopped an instant to order the organist to play, and then went on with the service calmly. When about to ascend the pulpit at a council in Baltimore, he received a dispatch announcing the burning of his cathedral, but he delivered his sermon without an allusion to the event. He had that sort of executive ability which accomplishes results without bustle. In his high station he made a wise use of the assistance of others, and neither took to himself their glory when they succeeded nor incurred any odium from their failure. It was his lot to be the chief figure in a number of church pageants, and yet no touch of malice or envy visited him, because it was plain that the pomp was called forth by the occasion, and gave no gratification to the personal pride of the man. He had the full confidence of Catholics, and yet never excited the distrust of a Protestant community. It has been said that the history of his life is the history of the progress of the Catholic Church in New York; but it would be a mistake to say that that progress was due mainly to him, or even to him more than to any other man. It was a growth to which the labors of many men and the influence of various circumstances contributed. He was fortunate in succeeding Archbishop Hughes, for he was enabled to enter into the results of that prelate's controversies without inheriting any of the animosities they had engendered. His episcopate was like the calm after a storm. That he kept the peace so well was partly due to the fact that the era of contest was over, and partly to the character of the man. The first Bishop of New York was a foreigner, who never saw his diocese; the second and third bishops were of foreign birth and education. The first archbishop, though American by education and adoption, was of foreign nativity, and had to encounter a movement to proscribe both his birth and his religion; but the cardinal was the representative of a generation of distinctively American prelates, who seem to pursue their way by a sure-footed instinct toward conciliating the sentiment of their countrymen without compromising the interests of their church.

For four days the remains of Cardinal McCloskey lay in state in the episcopal residence and in the cathedral, and on Oct. 15, after an imposing funeral ceremonial, they were conveyed to the vault beneath the sanctuary. The cardinal left a brief and simple will, conveying all his property to his coadjutor and the Bishops of Albany and Brooklyn.

MADAGASCAR, an island in the Indian Ocean, separated from the coast of Africa by the Mozambique Channel. In 1810 the chief of the Hovas conquered the other tribes of the island. Radama I entered into relations with England, which were interrupted during the reign of the Queen Ranavalo I. She was succeeded in 1861 by her son, Radama II, with whom Lambert concluded a treaty in the name of France. Rasoherina, the widow of Radama, mounted the throne in 1863 in consequence of a revolution. In 1865 she made a treaty of amity and commerce with England and with the United States. In 1868 her successor, Queen Ranavalo II, concluded one with France. The present ruler is Queen Rasendranoro Ranavalo III, born in 1860, who succeeded her aunt, July 13, 1883, and married the Prime Minister Rasaromino, widower of the late Queen.

The contour of the island is a remarkable series of straight coasts, excepting the northwest shore, which is broken by numerous bays and inlets that afford excellent harbors. A girdle of forests, ten to forty miles deep, extends around the entire coast. The central portion of the island is formed of mountains, rising from 3,000 to 5,000 feet above the level of the sea, and fertile table-lands.

Area and Population.—The area of Madagascar and adjacent islands is estimated at 591,964 square kilometres, about 227,600 square miles. The population is about 3,500,000, according to the estimate of Rev. J. Sibree. The official religion is Christianity, in the Independent Presbyterian form, introduced by Protestant missionaries of the London Missionary Society. The capital, Antananarivo, situated in the interior of the island, has from 70,000 to 80,000 inhabitants. Tamatave, the principal seaport, contains about 3,000 inhabitants.

Commerce.—The foreign trade is carried on mainly with the English colony of Mauritius. One of the chief articles of importation is rum. The exports are cattle, hides, wax, caoutchouc, gum, tallow, oil-seeds, rice, etc. The value of the imports from Mauritius was some time ago reported to be about $700,000 a year, the exports to Mauritius $750,000. The export and import trade with all countries has recently been estimated to amount to $5,000,000, notwithstanding the lack of roads and the infrequent foreign communications. American commercial interests in Madagascar have been considerable.

Ethnology.—The aboriginal population, of African origin, have been conquered or driven back into the mountains by the Hovas, who are of Malayan stock. They have the yellow skin, the long and straight hair, and the facial characteristics of the inhabitants of Malaysia. Their dominion extends over a quarter of the surface of the island. They are intelligent, energetic, and lively, and possess commercial aptitudes, but are fickle and deceitful. The primitive Malagasy race, mentally inferior, but more trustworthy, is divided into a number of tribes called the Akantars, the Betsinusarak, the Bethalemens, and the Sakalavas. The Hova immigration began during the period when the French colony was in existence. In 1821 they menaced the French establishments, and were defeated at Antongil Bay. Their political supremacy dates from the middle of the last century. In 1754 they captured the French fort at Foulepointe, and massacred all the French and the natives in the place.

The Military Situation.—During the Tonquin campaign the French undertook no aggressive operations in Madagascar. In the early part of the year the French maintained a blockading squadron on the coast and occupied Tamatave and other points. Behind the three most important ports the Malagasy soldiery were posted in intrenched camps beyond range of the naval artillery, determined to resist any movement of French troops into the interior. Toward the close of 1884 M. Ferry obtained a credit of 17,000,000 francs for operations in Madagascar. After the termination of the Chinese War, M. de Freycinet obtained 12,000,000 francs to cover the expenses of the occupation. The French claimed, by virtue of treaties with the Sakalavas, sovereign rights over the northern third of the island, including the best harbors on both coasts. The advent of the rainy season prevented any decisive operations before April, 1886.

Diplomatic Negotiations.—After the close of the conference between Admiral Miot and the Malagasy ministers in May, 1884, no intercourse took place between the two governments until the summer of 1885, when the Italian consul, at the instance of the Hova Government, endeavored to mediate a peace on a basis proposed by the Hova Prime Minister, Rainilaiarivony. On June 13 he presented to the French representatives the proposal of the latter for an armistice, and the opening of a conference that should "result in cementing anew the oldest of Madagascar's alliances, that with France." As preliminaries for a stable treaty, he proposed that France should withdraw her troops and recognize the sovereign rights of the Queen over the whole island, and should render military aid to the Queen, if requested, in maintaining her dominion, in return for which the Malagasy Government would accept the high guarantee of France and would bind itself not to conclude a convention with any foreign power, granting any special privilege or a cession of territory. Admiral Miot and the French consul Baudais answered on June 25 with counter-proposals, which were all accepted, except one stipulating that the "protectorate" instead of the "high guarantee" of France should be acknowledged by the Hova Government. The Italian consul, M. Maigrot, acted as intermediary in the negotiations. Admiral Miot threatened that, if the word "protectorate" were not accepted, he would decide the matter with arms, and explained that a protectorate would imply the presence in the capital of a French resident with a guard of French troops, as in Tunis and Cambodia. Rainilaiarivony offered to accept the word in the preliminaries on the condition that it should be altered in the definitive treaty. The negotiations were broken off on Aug. 15.

Military Operations.—The French garrisons in Madagascar were re-enforced by troops returning from Tonquin, and the blockading squadron was augmented in the summer. The eleven French war-vessels prevented the admission of supplies from without to the Hovas in the interior, who were threatened with famine. The failure of their suit for peace spurred them to more active military preparations. The army was thoroughly reorganized, and all classes, rich and poor, were enrolled for service. M. de Freycinet, in asking for the vote of credit, said that the blockade was insufficient, and that it would be necessary to occupy several points on the coast. The rights of France over Madagascar, which M. Passy said had slumbered for two hundred years, he described as a national patrimony, such as all peoples possess, which was kept in reserve, which formed part of the past, and which opened up possible fields for the future. The Hovas, he said, have violated French rights of property recognized by treaty, and inflicted injury and cruelty on French citizens, and if the French flag should retreat before the Hovas and France fail to obtain the satisfaction demanded, when the Hovas had used scornful and haughty language, relying on their topographical situation, protected by mountains and dense forests, it would be a saddening spectacle.

In the beginning of August, 600 re-enforcements arrived at Tamatave, followed by others shortly afterward. On Sept. 10 Admiral Miot attempted to carry by storm an intrenched position held by the Hovas at Tarafat. After two hours of severe fighting the French troops were compelled to fall back on Tamatave with a loss of thirty men killed and wounded. On Nov. 21 the Chamber voted a fresh credit of 4,000,000 francs to keep up the force in Madagascar during the first three months of 1886.

Resumption of Peace Negotiations.—After the failure of the efforts of the Italian consul to mediate terms of peace, M. de Freycinet sent M. Patrimonio, whose ostensible mission was as consul to Zanzibar, with the revised draft of a treaty of peace. The treaty was agreed to, with the exception of three articles. In the latter part of December the French Minister intimated that it was substantially accepted. It was reported that the terms were that a French resident should be maintained at Antananarivo, attended by a guard of honor, charged with the duty of advising the Hova Government in foreign affairs, and that the French troops should remain on the island until an indemnity of 10,000,000 francs has been paid for the satisfaction of claims arising from the injuries to the property and rights of French citizens. The Hova Queen was recognized as sovereign over the whole island, and no direct mention was made of a French protectorate.

MAINE. State Government.—The following were the State officers during the year: Governor, Frederick Robie, Republican; Secretary of State, Oramandel Smith; Treasurer, Edwin C. Burleigh; Attorney-General, Orville D. Baker; Superintendent of Common Schools, N. A. Luce; Insurance Commissioner, J. O. Smith; Railroad Commissioners, A. W. Wildes, John F. Anderson, and D. N. Mortland. Judiciary, Supreme Court: Chief-Justice, John A. Peters;

Associate Judges, Charles W. Walton, Thomas F. Haskell, Charles Danforth, William W. Virgin, Enoch Foster, Artemas Libbey, and Lucilius A. Emery.

Legislative Session.—The Legislature met on Jan. 7 and adjourned on March 6. Among the acts passed were the following:

To incorporate the city of Brunswick.

To amend section 21 of chapter 59 of the Revised Statutes, relating to the record of deaths.

To authorize the Eastern Maine Railway Company to reduce the amount of its capital stock.

To amend sections 1 and 2 of chapter 122 of the Revised Statutes, relative to the penalties for perjury.

To amend section 25 of chapter 40 of the Revised Statutes, relating to the taking of clams and shell-fish.

Relating to the jurisdiction of municipal courts and police judges and trial justices in prosecutions for violation of the fish and game laws.

To amend section 17 of chapter 40 of the Revised Statutes, relating to migratory fish.

To amend the charter of the city of Augusta relating to the Common Council.

Amending chapter 2, sections 40 and 41 of the Revised Statutes, relative to record of qualifications of justices of the peace.

Establishing the standard weight of a bushel of beans.

To establish the standard weight of a barrel of potatoes.

For the protection of lobster-traps.

Relating to scientific temperance instruction in public schools.

To amend section 127 of chapter 11 of the Revised Statutes, relating to School for the Deaf.

To amend section 8 of chapter 24 of the Revised Statutes, relating to paupers.

To incorporate the Biddeford and Saco Railroad Company.

To amend section 54 of chapter 40 of the Revised Statutes, relating to the transportation of trout, togue, and landlocked salmon.

To cede to the United States jurisdiction over certain land in Augusta.

To prohibit the taking of herring within certain limits in Machias Bay.

For the protection of trout and landlocked salmon in the Rangely, South Bog, Bemis, Cupsuptic, and Kennebago streams.

To amend chapter 40 of the Revised Statutes, relating to fish and fisheries.

To amend section 26 of chapter 30 of the Revised Statutes, relating to the disposal of fines.

To incorporate the Eastern Maine State Fair.

To amend section 100 of chapter 47 of the Revised Statutes, relating to banks and banking.

To establish the legal weight of a bushel of herdsgrass seed.

To amend section 16 of chapter 132 of the Revised Statutes, relating to appeals from magistrates.

To amend section 29 of chapter 91 of the Revised Statutes, relating to a lien on wood.

To amend section 4 of chapter 140 of the Revised Statutes, relating to the State prison.

To incorporate the Central Washington Agricultural Society.

To facilitate the giving of bonds required by law.

To regulate the admission of foreign surety companies to do business in this State.

To establish a State Board of Health.

Providing for the choice of park commissioners.

Additional to chapter 51 of the Revised Statutes, relating to railroads.

To extend the time for the location and construction of the Wiscasset and Quebec Railroad, the Messalonskee and Kennebec Railroad, and the Somerset Railroad.

To establish an agricultural experiment station.

To amend section 73 of chapter 49 of the Revised Statutes, relating to licensing insurance agents.

To amend chapter 128 of the Revised Statutes, relating to the sale of unwholesome food.

To amend section 54 of chapter 70 of the Revised Statutes, relating to securing property with intent to defraud creditors.

To amend sections 25 and 27 of chapter 4 of the Revised Statutes, relating to elections.

To authorize railroads to aid in the construction or equipment of branch and connecting lines.

To amend section 37 of chapter 14 of the Revised Statutes, relating to contagious diseases among cattle.

To amend section 27 of chapter 18 of the Revised Statutes, relating to laying out ways across railways.

To amend section 14 of chapter 15 of the Revised Statutes, relative to private burying-grounds.

To amend section 28 of chapter 51 of the Revised Statutes, relating to railway-crossings.

Additional to chapter 70 of the Revised Statutes, relating to the discharge of insolvent debtors.

To amend section 21 of chapter 70 of the Revised Statutes, relating to sales of property under proceedings in insolvency.

To render more effective section 126 of chapter 51 of the Revised Statutes, relating to accidents on railroads.

Relating to appointment of administrators in cases where wills have been lost or destroyed on estates interested in French spoliation claims.

To amend section 46 of chapter 70 of the Revised Statutes, relating to discharges under the insolvent laws.

Providing for the taxation of life-insurance companies.

To amend section 7 of chapter 4 of the Revised Statutes, relating to elections.

To amend and make clear section 63 of chapter 3 of the Revised Statutes, relating to fish-weirs on the sea-shore.

In addition to section 26 of chapter 51 of the Revised Statutes, in relation to railroads crossing each other at grade.

For the assessment of State tax for the years 1885 and 1886, each amounting to $886,399.18.

To amend section 25 of chapter 26 of the Revised Statutes, relating to inner doors of school-houses and other public buildings.

To prohibit the sale to minors of publications devoted to criminal news.

To amend section 11 of chapter 58 of the Revised Statutes, relating to agricultural institutions.

To amend section 12 of chapter 11 of the Revised Statutes, in relation to apportionment of school money.

To authorize the licensing of private detectives.

Amendatory of and additional to chapter 27 of the Revised Statutes, relating to the sale of intoxicating liquors.

For the protection of legitimate trade.

To amend section 75 of chapter 51 of the Revised Statutes, relating to railroads.

Exempting Masonic, Odd-Fellows, and other relief associations from the operation of the statutes relating to life insurance.

To amend section 103 of chapter 81 of the Revised Statutes, relating to the limitation of actions barred by the laws of the State or county where the parties reside.

To prevent incompetent persons from conducting the business of apothecaries.

Savings-Banks.—The present number of depositors in the 54 savings-banks is 109,398. Of this number 86,571 are depositors of less than $500 each, and the average amount of the whole is $320.95 to the credit of each account. This is an increase of 3,718 accounts and a gain of $9.51 to the average balance. At the close of 1884 there were 20,788 depositors of more than $500 each; now there are 22,827.

The investment in United States bonds has decreased during the year from $4,739,840.58 to $4,421,784.12. There has been an increase of holdings in State, county, and city bonds of $1,145,471.90.

The aggregate of railroad bonds owned by the savings-banks is $5,329,536.47—a gain during the year of $966,155.01.

The amount invested in railroad stock, and stock and bonds of other corporations, is $1,322,366.78. This shows a slight increase.

The loans on mortgages of real estate have increased during the year from $5,216,929.17 to $5,645,969.08; while all other loans show a decrease of $389,105.57; the aggregate being $4,219,574.47.

Patrons of Husbandry.—There is a total of 184 subordinate granges, with an average membership of 73 for each grange, and an aggregate membership in the State of 13,531. There are two granges less than reported last year, but a net gain of 336 in members during the year.

Industrial School for Girls.—The annual report for 1885 shows the following facts: In 1885, 16 girls were admitted to the Industrial School at Hallowell, making a total since the organization of the school of 197. Number in the school Dec. 8, 1884, 47; average number during the year, 49; number committed during the year, 16; returned to the school, 5; sent to homes, 22; married, 1; deaths, 9; number now in homes, 95; married before reaching majority, 19; reached majority while unmarried, 16; returned to friends, 7; dismissed as incorrigible, 4; dismissed as unsuitable, 3; deceased, 6; escaped, 1; present number, 46.

Insane Hospital.—The following are the statistics of this institution for the year: On Dec. 1, 1884, there were in the hospital 460 patients—232 men and 228 women; 249 have been admitted since—153 men and 96 women; making the whole number 709. Of these there have been discharged 223—144 men and 79 women, leaving at the close of the year 486—241 men and 245 women. Condition of those discharged: recovered, 80—47 men and 33 women; improved, 54—39 men and 15 women; unimproved, 12—8 men and 4 women; died, 77—50 men and 27 women. There were 28 insane criminals in the hospital.

Liquor-Sales.—The State liquor agent reports liquor sold to cities and towns as follows: whisky, 6,876 gallons; brandy, 454 gallons; gin, 1,284 gallons; alcohol, 5,368 gallons; rum, 8,342 gallons; wine, 949 gallons. In addition, liquors in quarts and pints have been sold as follows: whisky, 949 quarts, 76 pints; brandy, 26 quarts; gin, 24 quarts, 18 pints; champagne, 7 quarts, 30 pints; porter, 301 quarts, 89 pints; ale, 236 quarts, 162 pints; wine, 35 quarts; beer, 72 quarts, 1,632 pints. The expenses of the office for the year were $2,219.80.

Ship-building.—The ship-building interests of Maine have been depressed, the net tonnage having decreased from 46,401.87 in 1884 to 23,053.98 in 1885. There has also been a great change in the character of the vessels built, the majority being under 100 tons and designed for the coasting-trade, instead of from 300 to 800 tons, as in former years. Schooners are becoming more popular. There has not been a brig built in a Maine ship-yard for two years, and the number of barks shows an annual decrease. There has been no such decline in ship-building since 1861.

Ice.—The ice business of Maine showed the following summary for the season of 1885: tons of old ice, 108,500; new ice, 1,319,400; water-shipments, 62,500. Total, 1,490,400 tons.

Fisheries.—The following table gives the statistics of Maine fisheries in the different customs districts. The first column gives the number of vessels registered; the second, the tonnage; and the third, the estimated number of men employed:

Bangor	7	97·84	....
Bath	15	218·43	60
Belfast	33	1,698·77	...
Castine	60	2,549·84	650
Frenchman's Bay	65	1,786·86	475
Kennebunk	19	356·04	100
Machias	27	456·69	500
Passamaquoddy	26	839·00	2,500
Portland and Falmouth	142	6,652·54	4,000
Saco	5	44·50	20
Waldoboro	151	3,774·32	750
Wiscassett	72	2,265·92	800
York	5	47·77	20
Total	617	20,788·02	9,875

The average wages per month is $31.25; total amount invested, $3,278,000; estimated value of all products of fisheries, $3,886.375.

Lumbering.—The cut of the winter of 1885 on the Penobscot and its tributaries may be summarized as follows: West Branch, 25,000,000 feet; East Branch, 20,000,000; Mattawamkeag, 28,000,000; Piscataquis, 15,000,000; Passadumkeag, 5,000,000; Main river (brooks), 5,000,000; total, 98,000,000 feet. Of this, about 58,000,000 is spruce, 25,000,000 pine, and 15,000,000 hemlock, cedar, etc. Of the pine cut, 12,000,000 comes from the Piscataquis, and is all second-growth box-board stuff.

MANITOBA. Government. — The Lieutenant-Governor is James Cox Aikens; Premier, Provincial Treasurer, and President of the Council, John Norquay; Minister of Agriculture, Statistics, and Health, A. A. C. La Riviere; Minister of Public Works, J. P. Brown; Provincial Secretary, W. H. Wilson, M. D.; Attorney-General, C. E. Hamilton, Mayor of Winnipeg.

Exemption Law.—The Manitoba Legislature enacted this session an exemption law so liberal to debtors that a great outcry was raised in the older provinces, where the Boards of Trade and merchants made vigorous protests and demanded the disallowance of the new law by the Dominion Government. Among other things exempted from seizure may be mentioned real estate in any town to the value of $2,500, household effects to the value of $500, and in the country 160 acres of land and all buildings thereon. Some of the Toronto and Montreal merchants went so far as to say that the new law was *ultra vires*, because it would interfere with inter-provincial trade, while legislation on all matters connected with trade and commerce appertains to the Dominion Government, and demanded the disallowance of the whole law. Others made a more reasonable demand: that the law should be disallowed in so far as it would interfere with existing contracts, holding that, as eastern merchants and manufacturers had given credit to Manitoba customers on the faith of the security afforded by their property, the Provincial Legislature had no right to step in and wipe that security out of existence.

Provincial Claims.—An agreement was arrived at this year between the Federal and Provincial governments, on certain questions that have been the occasion of great discontent in the province for some time. In December, 1883, the Farmers' Union of Manitoba, a powerful organization, including in its ranks members of both political parties, met in convention and formulated a "Bill of Rights," which it submitted to the Dominion Government, and which was unanimously adopted by the Provincial Legislature. The Legislature appointed a delegation composed of the Hon. John Norquay, Premier and Provincial Treasurer; the Hon. Alexander Murray, Speaker of the Legislative Assembly; and the Hon. William Miller, Attorney-General, to lay the claims of Manitoba before the Dominion Government. The delegates urged the right of the province to the control, management, and sale of the public lands within its limits for the public uses thereof; and the mines, minerals, wood, and timber thereon, or an equivalent therefor, and to receive from the Dominion Government payment for the lands already disposed of by them, within the province, less cost of surveys and management. The Federal Government refused this demand, arguing that the lands of Manitoba hold a different position in relation to the Dominion from the lands of the other provinces. The Northwest lands, out of which Manitoba was formed, were acquired by the Dominion Government by purchase from the Hudson Bay Company at considerable cost. The Dominion Government is at further cost in extinguishing Indian titles and maintaining the Indians. The Dominion Government also contended that the lands were being "applied to the public uses of Manitoba" by being utilized for railway purposes. By agreement in 1881, $45,000 per annum was accepted by the province as compensation for the public lands. The Dominion Government, however, now agreed, following the practice of the United States Government in dealing with new States, to transfer all the swamp lands to the province. The delegates also asked that the school lands be transferred to the province, which was likewise refused. The proceeds of all sales of school lands are invested in Government securities, and the interest is paid to the Provincial government for school purposes. The Dominion Government announced its intention of selecting 150,000 acres of land as an endowment for the University of Manitoba. The delegates also asked for the adjustment of the capital account of the province decennially according to population, the present population to be assumed to be 150,000 and to be altered until it corresponds to the amount allowed Ontario on that account. The Dominion Government agreed to grant Manitoba the same per capita allowance on an assumed population of 150,000 that had been originally granted to a population of 17,000, the capital sum therefrom to be charged with such advances as have already been made from the former capital account and expenditures incurred by the Dominion Government of a strictly local character. The delegates further demanded for the province the right to charter railways in the province, except so far as that right is limited by its own legislature in the Extension Act of 1881. This demand arose out of the disallowance of certain railway charters that were held to conflict with the Canadian Pacific Railway Act, which forbids the Dominion Parliament to charter any railway south of the Canadian Pacific and running from any point at or near that line, except such lines as shall run southwest, nor to within fifteen miles of latitude 49°. The object of this clause was to prevent the tapping of the Canadian Pacific by any of the American trunk lines. The Dominion Government declined to alter its policy of protecting the Canadian Pacific until the expiration of the time mentioned in its contract. The delegates asked that the grant of eighty cents a head be not limited to a population of 400,000, but continued until the Ontario maximum is reached. The Dominion Government, in view of the exceptionally rapid increase in the population of Manitoba, granted that, instead of a decennial increase in the annual grant, Manitoba should have an increase four times in every decade; a quinquennial census to be taken and an approximate estimate of the population to be made at evenly divided periods between each census; the 400,000 limit to be adhered to. The delegates asked for extended provincial railway facilities, and particularly for the energetic prosecution of the Manitoba Southwestern, the Souris and Rocky Mountains, and the Manitoba and Northwestern Railways. Without committing itself to any definite promises, the Dominion Government pointed to the expenditure on the Canadian Pacific Railway and on the Hudson Bay explorations as proofs of its desire to extend railway facilities in Manitoba and the Northwest in any direction that will not conflict with the general interest and engagements of the Government. The delegates called the attention of the Government to the prejudicial effects of the tariff on Manitoba. The Government declined to see any such prejudicial effects except in a few instances, which would be remedied as the means of transport from the older provinces improved. The delegates asked for an extension of the boundaries of Manitoba, chiefly with a view to enable the province to extend its railway system to Hudson Bay. The Government declined to grant the proposed enlargement, which would add about 180,000 square miles to the already large province, and would be unfavorably regarded by the new districts of the Northwest as well as by the older provinces. The Government undertook to compel the two companies chartered by the Canadian Parliament for the construction of railways from Manitoba to Hudson Bay to amalgamate, and to offer them, on condition of making provisions in Manitoba for the early construction of the railway, and against pooling or amalgamating with other railways and against excessive freight-charges, to ask Parliament to convert the sale that it was intended to have made to them of 1,708,000 acres of land in Manitoba at one dollar an acre, and 4,480,000 outside the province at half a dollar an acre, into a free gift.

Lately there has been a continuous agitation in the province for better terms. Messrs. Murray and Norquay having been delegated by the Legislature of Manitoba to urge upon the Dominion Government a reconsideration of the above-outlined compromise, suggested the following modifications: That the Dominion pay the province $100,000 a year in lieu of lands; that the debt capital, in consideration of the above, be allowed on a population of 125,000 instead of 150,000; and that the province waive its claim to reimbursement by the Dominion of costs incurred in the government of the disputed territory, and the reference of the question of the settlement of the boundary between Ontario and Manitoba to the Judicial Committee of the Privy Council. These modifications were accepted by the Dominion Government, and the agreement thus modified was ratified by Parliament, on condition that the Legislature of Manitoba should at its next session accept it as a full settlement of all questions in dispute up to Jan. 10, 1885.

The "better terms" proved very unsatisfactory to the Farmers' Union. A convention was held at Winnipeg on March 4. The Bill of Rights, adopted in 1883, was reaffirmed, and violent speeches were made. Mr. Norquay being asked to attend, declined, but expressed his willingness to confer with a committee appointed by the convention. This the convention declined. The "better-terms bargain" was vigorously denounced, and some of the farmers advocated the secession of Manitoba from the Canadian Confederation. Resolutions were passed, censuring Mr. Norquay, demanding a redistribution of seats in the Provincial Legislature, the introduction of the ballot, the extension of the Manitoba Southwestern Railway, the maintenance of the existing wheat grades; and resolving, in the event of the Legislature accepting the "better-terms bargain," to call another convention to condemn the Legislature. The Legislature, notwithstanding this, ratified the bargain.

MARYLAND. State Government.—The following were the State officers during the year: Governor, Robert M. McLane, succeeded by Henry Lloyd, Democrats; Secretary of State, Robert B. Milligan; Attorney-General, Charles B. Roberts; Comptroller, J. Frank Turner; Treasurer, Barnes Campton, succeeded by John S. Gittings; Tax Commissioner, Levin Woolford; Insurance Commissioner, Jesse K. Hines; Commissioner of the Land-Office, J. Thomas Scharf; Commissioner of Labor Statistics, Thomas C. Weeks; Secretary of the Board of Education, M. A. Newell. Judiciary, Court of Appeals: Chief Judge, Richard H. Alvey; Associate Judges, L. T. H. Irving, John M. Robinson, George Yellott, Oliver Miller, John Ritchie, Frederick Stone, and William S. Bryan. Governor McLane, having been appointed United States Minister to France, resigned the governorship, and on the 27th of March, in pursuance of the Constitution, the President of the Senate entered upon the discharge of the duties of the office. He is to act until the Legislature convenes in 1886.

Finances.—The Comptroller's report for the year ending Sept. 30, 1884, shows that the total receipts from all sources amounted to $3,729,576.15; balance in the treasury, Sept. 30, 1883, $982,183.52, making the amount in the treasury for the year, $4,711,759.67. But of this amount there was received on account of defense redemption loan, and the premium upon the same, $1,686,496.22. The total disbursements during 1884 were $3,874,761.28. Of this aggregate, the sum of $1,999,086.66 was money expended in part redemption of the old defense loan; the further sum of $117,794.94 was for expenses of the Legislature, and $71,280 was invested in bonds for the sinking fund for the defense redemption loan, leaving the sum of $1,686,509.68 as the net ordinary disbursements for the year 1884. For the year ending Sept. 30, 1885, the total receipts from all sources amounted to $2,112,405.61. Balance in treasury Sept. 30, 1884, $837,088.39, making the total amount in the treasury for the year $2,949,494. The total disbursements for the year were $2,202,086.67; leaving a balance on Sept. 30, 1885, of $747,407.33. The gross outstanding debt of the State has been reduced in two years by nearly $300,000. On Sept. 30, 1883, it was $11,269,822.89. It is now $10,970,363.34. The net debt is $6,451,563.97.

Comparison of the assessed value of property for State levy in 1885 with that of 1877 shows a decrease of $5,195,884, the levy for 1885 being $473,452,144, while that for 1877 was $478,648,028. "There are," says the Governor in his message to the Legislature of 1886, "at least $200,000,000 of capital secured by mortgages in this State upon which no taxes are levied, and further investments in mortgages are being made which curtail State revenues." He recommends a new assessment on a plan calculated to reach all kinds of property.

In 1885 the aggregate assessment of shares of stock of corporations was $65,038,001.37$\frac{1}{2}$; taxable deposits of savings institutions, $7,759,029.59. The total deposits in the eighteen savings institutions amounted to $28,853,863.10.

Oysters.—The total number of men actually employed in the catching of oysters is 26,072. The oyster-canning houses of the State give employment to 14,640 men and women, showing a grand total of 40,712 employés. About 9,000,000 bushels of oysters were caught last season. The current expenses of the present State fishery force have been paid from the oyster revenues, which have proved sufficient for the purpose. The oyster receipts for the fiscal year 1885 amounted to $79,704.17; gross ordinary disbursements to $65,030.70.

There have been two decisions, during the year, upon the constitutionality of that clause of the law by which the State requires a license to be taken out to buy or carry oysters. Under writs of *habeas corpus*, Judges Bond, of the United States Court, and Irving, of the State Court, have discharged parties arrested for violating this clause, by deciding it to be unconstitutional.

Penal Institutions.—The Maryland Penitentiary is now in the seventy-fourth year of its operations. The average number of prisoners for the past three years has been 520, while the average of any preceding three years in which any considerable surplus was declared was 779$\frac{2}{3}$.

The House of Correction, originally intended for the imprisonment of those guilty of petty crimes and to relieve the crowded condition of the Penitentiary, has for the past year been filled beyond its proper capacity. Fiscal year 1885, total expenditures, $30,933.26; prisoners received, 858; cost per capita, $120.84.

Hospital for the Insane.—The building of another asylum, to be on the Eastern Shore, is recommended. Embarrassments have attended the failure of the counties promptly to pay for the maintenance of their respective patients. Their indebtedness to this institution has increased $10,000 in the past year, and amounted, Oct. 31, 1885, to $24,459.47.

Militia.—The Adjutant-General calls attention to the unsatisfactory condition of the militia, due, as he says, to the meager appropriations, which for the past year amounted to $15,450 for 27 companies, each company receiving an average of less than $500. Five companies, equipping themselves, have been received into the service in addition to the 27 for which State aid has been provided.

Education.—The following summary exhibits the most important facts connected with the administration of the public-school system of the State, for the school year ending July 31, and the fiscal year ending Sept. 30, 1884, so far as such facts can be presented in figures.

Number of schools in Baltimore city	120
In the counties	1,977
Total	2,097
Number of different pupils in the city	54,778
In the counties	115,615
Total	170,393
Receipts from all sources in the city	$650,128 98
In the counties	1,018,911 71
Total	$1,669,040 69
Amount paid teachers in the city	$550,029 98
In the counties	695,654 46
Total	$1 245,684 44
Total expenses in the city	$701,352 53
In the counties	1,018,911 71
Total	$1,720,264 24

The number of children in the State between five and twenty years of age in 1883 was 295,215, of whom 68,409 were colored. The number of colored schools for the year ending July 31, 1884, was 415; teachers, 536; different pupils, 31,327; average attendance, 12,574; highest enrollment in one term, 25,037; cost of schools, $171,047.64; months open, 8$\frac{7}{10}$. These figures are included in the totals above. Besides the State Agricultural College, the following colleges receive donations from the State: St. John's, Western Maryland, Washington, Frederick, and the Baltimore Female College. The State Normal School, the School for Deaf and Dumb, and fifteen academies receive State aid.

"Under our present rule of distributing the State school-tax," says the Governor, "separate funds are appropriated to the white and colored schools. The colored schools first receive $100,000 per annum, and the white schools the balance collected from said tax. No injustice is done the colored schools by this appropriation, for in proportion to population they receive more than their full share. I believe the uniformity of the system requires no division of appropriations upon the color-line. Separate schools must be maintained and impartially operated, but they should be under one system, and paid from one and the same fund."

Political.—The Republican State Convention met on Sept. 24, and nominated for Comptroller, Francis Miller; and for Clerk of the Court of Appeals, William M. Marine. The platform favors civil-service reform, a protective tariff, and the regulation of corporations by law, and contains the following planks:

> *Resolved*, That we view with alarm the tendency in Federal appointments in this State to appoint to office the worst elements of the Democratic party, as testified to by the better element of the Democratic party itself, and that it is the duty of every good citizen, irrespective of party affiliations, to show his disapproval of such appointments as Higgins, Mahon, and Thomas, by defeating at the polls the nominees of Senator Gorman, whom we hold primarily responsible, such being the only way to overthrow bossism, and stamp out the disgrace thus brought upon the State of Maryland.

> *Resolved*, That while we recognize the duty of the State to provide means by which those confined in our penal and reformatory institutions, particularly the young, should be taught trades by which they may earn a livelihood and become useful citizens when they return to society, we declare that the employment of convict-labor under the contract system, in competition with the labor of honest men, is unjust and demoralizing, and should be prohibited by law.
>
> *Resolved*, That we are in favor of such a modification of our Constitution and laws as shall restrict the aggregate amount of bonded debt which any county or city within the State shall contract to some small percentage of the assessed value of the property within the same.
>
> *Resolved*, That the colored schools of the State are entitled to the same care, supervision, and financial support as the white schools.
>
> *Resolved*, That the first duty of every true son of Maryland, at this period of her history, is to secure the complete overthrow of the corrupt ring, by means of which *one man* rules as with a rod of iron the Democratic party of the State, and through that party subordinates the interests of the State and the people to his own selfish purposes.

The Democratic State Convention met on the 16th of September, and nominated J. Frank Turner for Comptroller, and Spencer C. Jones for Clerk of the Court of Appeals. The following are the more noteworthy resolutions:

> The larger part of these men [Republican office-holders] obtained their places before the passage of the Civil-Service Act of 1883, as rewards for partisan services to particular Republican leaders. Another portion, appointed since that year, owed their places to their selection for political reasons, by Republican superior officers from lists of candidates supplied by Republican examiners, examining boards, and special examining boards. They would not have been appointed to, or kept in office, under any rightly constructed or administered system of civil service. They ought not to be allowed to remain parts of a Democratic administration. A civil-service system which permitted such appointments, or which can be so managed as to secure the retention of such incumbents, requires speedy and radical reform.
>
> The existence of a great army of subordinate Federal office-holders, each holding his place by a permanent tenure, is not to be desired. When changes of administration occur, these fixed stipendiaries obstruct heads of departments and superior officers, with whom they do not sympathize in opinion, and prove great obstacles to administrative reforms. The formation of such a body, we believe, is in opposition to the letter and spirit of our Federal Constitution, and to the settled convictions of a people loving democratic institutions.
>
> The fitness of men to serve their country as subordinate public officers ought to be tested in such manner and under such regulations as Congress may deem best adapted to ascertain it. Their tenure of office ought to depend upon their actual, or continued, fitness to perform official duties. During such time as they may remain public officers they ought to be left free to perform the political duties of a citizen in such manner as their individual convictions may dictate, provided, in so doing, they do not neglect their official labor or violate the proprieties of public or official life. They ought not to be assessed for any political purposes, but should be left wholly free to use their means in such proper manner as they may prefer. These fundamental principles are the true basis of any just theory of civil-service reform. They have, in effect, been totally disregarded by the Republican party and those whom it placed in power.

At the election on Nov. 3, the Democratic ticket was successful. The vote for Comptroller was as follows: Democratic, 102,912; Republican, 72,304; Prohibition, 1,903. The Senate of 1886, with one vacancy, consists of 21 Democrats, 4 Republicans. The House has 79 Democrats, 10 Republicans, 1 Fusionist.

Baltimore.—The election for mayor and members of the City Council occurred on Oct. 28. Two tickets were in the field, one supported by the regular Democrats, and the other by the Republicans and by Democrats dissatisfied with the party management in city and State affairs. The Democrats nominated for mayor, James Hodges, a merchant, and the Independents, Chief Judge George W. Brown. The Independents had large hopes of success, but the Democrats had control of the election machinery and carried their ticket through. Hodges received 30,888 votes, and Brown 28,664; majority, 2,225. The first branch of the Council has 13 Democrats and 7 Independents; the second branch, 6 Democrats and 4 Independents. On Nov. 3 the people of the city voted for sheriff and other officers. The Democratic ticket was successful by a plurality of 10,000.

MASSACHUSETTS. State Government.—The following were the State officers during the year: Governor, George D. Robinson, Republican; Lieutenant-Governor, Oliver Ames; Secretary of State, Henry B. Peirce; Treasurer, Daniel A. Gleason; Attorney-General, Edgar J. Sherman; Auditor, Charles R. Ladd. Judiciary, Supreme Court: Chief-Justice, Marcus Morton; Associate Justices, Walbridge A. Field, Charles Devens, William Allen, Charles Allen, Waldo Colburn, and O. W. Holmes, Jr.

Legislative Session.—The Legislature met on Jan. 7 and adjourned on June 19. Its work is represented by 387 acts and 81 resolves. Perhaps the most important of the bills affecting the capital of the State is that which amends the charter of the city so radically as to make almost a new instrument of it. By this act, the power of the City Council is reduced to the exercise of purely legislative functions, and the mayor is made in fact, as well as in name, the executive magistrate, the only limitation placed upon his authority being that his appointments must be confirmed by the Board of Aldermen. As a result of the same causes which led to the charter bill, that to limit the debt and taxation of the city was passed. In this bill it is provided that the tax rate, exclusive of the State tax and sums required to be raised on account of the city debt, shall not exceed in any year $9 per $1,000 of valuation, based on the average valuation of the city for the preceding five years, and the limit of the borrowing capacity of the city is fixed at 2½ per cent. of the same valuation up to Jan. 1, 1887, and 2 per cent. thereafter.

The smoking of opium and the maintaining of opium "joints" has so increased as to necessitate the passage of a law that the keeping of such "joints," the selling or giving away of opium, or its preparation to be therein smoked or otherwise used, or the visiting of such places for the purpose of opium-smoking, shall be punished by fine or imprisonment.

The most important law concerning the judiciary of the State is that which provides for the retirement on three-fourths pay of any justice of the Supreme Court at the age of seventy, who has held his commission at least ten consecutive years prior to his retirement.

In railroad legislation several laws were enacted looking to the gradual abolition of grade-crossings, and to the relief of the Eastern and Central Massachusetts Railroads.

It was provided that officers of any political committee may affix to the ballots issued by them a certificate of their genuineness, and the printing or issuing of any false, forged, fraudulent, or counterfeit certificates is forbidden under penalty.

A law regulating debt and taxation in cities —similar to that affecting Boston—was passed, the cities of Worcester, Lynn, Brockton, and Gloucester being exempted until Jan. 1, 1889.

The power of naturalization was given to any court of record; but the powers and process of naturalization were surrounded with strictures intended only to make the fraudulent procuring of papers difficult and subject to heavy penalties. The laws in regard to the assessment and registration of voters were also made more stringent.

The publication and sale of papers devoted exclusively to the recital of tales of bloodshed and crime were prohibited, and the laws in regard to pool-selling and search-warrants for gaming instruments materially strengthened.

The Legislature approved of the proposed amendment relative to precinct voting, and sent it to the people. It passed, and sent to the next Legislature for action, an amendment providing for biennial elections and sessions.

Finances.—The funded debt Jan. 1, 1885, was $31,432,680.90; on Jan. 1, 1886, it was $31,432,680.90. Amount of sinking funds, Jan. 1, 1885, $17,731,724.94; Jan. 1, 1886, $18,182,672.44. Actual expenses, 1884, $4,817,242.20; 1885 (so far as ascertained), $4,902,748.09.

A State tax of $1,500,000 will evidently be necessary. The connection of the State with the New York and New England Railroad Company has ceased by the sale of the bonds of the company held by the State for $1,657,800 to parties who contributed fresh capital to relieve and develop the road.

Savings-Banks.—The number of banks in 1885 was 171; number of open accounts, 848,787; amount of deposits, $274,998,412.93.

When the fact is recognized that with a population of 1,942,000 there are 848,787 open accounts, over 40 per cent. of all the individuals in the State, and that the average sum standing to the credit of each depositor is $323.99, and the whole amount of deposits, if equally distributed, would give each inhabitant of the Commonwealth $141.64, the general thrift of the people of scanty earnings is demonstrated.

New Hampshire Boundary. — Commissioners have been appointed on the part of this State, a like commission having been constituted by New Hampshire, for the purpose of establishing the true boundary-line between the two States. The two commissioners have entered upon the work of survey and investigation, and there is reason to expect an early adjustment of this long controversy.

Topographical Survey. — During 1885 about 2,500 square miles, nearly one third of the area of the State, have been covered. The United States has also acted, by the Coast and Geodetic Survey, in behalf of the Commonwealth, in the triangulation of the valley of Connecticut river. The city and town boundary survey has been begun in the counties of Suffolk, Norfolk, Plymouth, and Bristol.

Education. — The outlay for common-school expenses during 1885 reached the grand total of $7,045,412.25, affording more than $20 to each pupil between the ages of five and fifteen. Number of public schools, 6,447; teachers, 9,521; persons between five and fifteen, 343,810; of all ages in public schools, 339,714.

The building for the Normal Art School, provided for in 1885, has been begun, and its early completion is anticipated.

Drainage.—A commission was appointed in 1884 to consider a general system of drainage for the valleys of Mystic, Blackstone, and Charles rivers, and certain other portions of the Commonwealth. Investigations have been made from time to time, to discover adequate methods of relief from the perils to life and property consequent upon insufficient and faulty systems of sewerage in the most populous portions of the State, but no comprehensive action has resulted. The present commissioners have dealt with the problem in an exhaustive manner, and they present facts, arguments, conclusions, and recommendations, with drafts of bills, by way of suggestion.

Civil Service.—The system for the administration of the civil service, inaugurated by the statute of 1884, and defined by the rules prepared by the commissioners and approved by the Governor and Council, went into operation on March 30. Up to Dec. 1, 84 examinations had been held for the clerical, police, prison, and fire service of the Commonwealth and of the several cities, at which 1,052 men and 240 women were examined, and 958 passed. The number of appointments during the period stated, from those certified as eligible, was 188, of whom 133 were men and 55 were women. In two branches of the public service—the State Bureau of Statistics of Labor and the Boston Police Department—the new system has been fairly tested. The chief of the bureau says, "In intelligence, in capacity, in attainment, and in attendance upon work, our present force reflects the greatest credit upon the civil-service system." The Boston Board of Police say, "It can be said emphatically that the application of civil-service rules to appointments and promotions in this department has been attended with very satisfactory results."

Liquor Laws.—"Under the operation of the statute of 1885," says the Governor, "prohibiting the sale or delivery of intoxicating liquors on election-days, the results thus far observed in the towns and cities abundantly justify the enactment. In Boston, the daily average of such arrests is 47, while on the day of the last State election but 11 were arrested, and on the last municipal election-day only 16."

Prisons.—The number of prisoners in all the prisons in the Commonwealth, Oct. 1, 1884, was 4,388; Oct. 1, 1885, it was 5,352. Undoubtedly much the largest portion of this apparently alarming increase is due to the operation of the law imposing heavier penalties for drunkenness. But there is alarming evidence that the more serious crimes are more frequent. In the year 1883–'84 (ending Oct. 1) there were 124 commitments to the State Prison; while in 1884–'85 there were 139. Besides, during the latter year the Reformatory at Concord had been receiving prisoners, many of whom would have been otherwise sentenced to the State Prison. At present the number of convicts in the State Prison, 510, is as large as the institution can accommodate. In the recent alterations, the number of cells was much reduced by the enlargement of their size. A year ago the number of prisoners in the Massachusetts Reformatory at Concord was 140. From that time there has been a rapid gain until the number stands now at 620.

Lunatic Hospitals.—From the reports of the trustees and superintendents of the lunatic hospitals it appears that the pressing demand is for more room for patients. When arrangements are completed—probably in the spring of 1886—for reception of patients at Westborough, there will be accommodations, on present plans, for 325 in that institution. "I see no way," says the Governor, "to meet the exigency except by the construction of a commodious and comparatively inexpensive asylum, sufficient for 200 or 300 persons, in connection with one of the present establishments."

Population.—A census was taken by the State authorities during the year. The following table gives the result by counties compared with the census of 1880:

COUNTIES.	1885.			1880.
	Males.	Females.	Total.	
The State	932,429	1,009,036	1,941,465	1,783,085
Barnstable	14,466	15,379	29,845	31.897
Berkshire	36,037	37.597	73,634	69,032
Bristol	75,851	82,640	158,491	139,040
Dukes	2,006	2,129	4,135	4,300
Essex	126,019	137,675	263,694	244,535
Franklin	18,761	18,687	37,448	36.001
Hampden	55.917	60,860	116.777	104,142
Hampshire	22.921	25,551	48,472	47.232
Middlesex	169,214	187,596	356,810	317,830
Nantucket	1,340	1,803	3,143	3,727
Norfolk	49,022	53.152	102.174	96,507
Plymouth	40,561	41.128	81,689	74,018
Suffolk	200,727	220,395	421,122	387,927
Worcester	119,587	124,444	244,031	226,897

The following is the population in 1885 of the cities and towns of over 10,000 inhabitants: Boston, 390,406; Worcester, 68,383; Lowell, 64,051; Cambridge, 59,660; Fall River, 56,863; Lynn, 45,861; Lawrence, 38,845; Springfield, 37,577; New Bedford, 33,393; Somerville, 29,992; Salem, 28,084; Holyoke, 27,894; Chelsea, 25,709; Taunton, 23,674; Haverhill, 21,795; Gloucester, 21,713; Brockton, 20,783; Newton, 19,759; Malden, 16,407; Fitchburg, 15,375; Waltham, 14,609; Pittsfield, 14,466; Newburyport, 13,716; Attleborough, 13,175; Northampton, 12,896; North Adams, 12,540; Quincy, 12,144; Woburn, 11,750; Chicopee, 11,528; Marlborough, 10,941; Weymouth, 10,740. The population of Boston in 1875 was 341,919; in 1880, 362,536. The population of the State in 1875 was 1,651,919.

Political.—The Republican State Convention met in Springfield on the 30th of September, 328 towns and cities being represented by 1,024 delegates. The Governor and other State officers were renominated, except that A. W. Beard was nominated for Treasurer. The platform demands the enactment of a bankrupt law, the suspension of silver coinage, the enforcement of the Edmunds law in Utah, the extension of the Civil-Service Act, the submission to the people of the State of the biennial elections amendment, favors a protective tariff and congressional aid to education in the South, and denounces the suppression of the colored vote in that section. It contains the following plank:

> Massachusetts under Republican rule has done much for labor. No other State approaches our record in this respect. We urge a close and continued attention to all questions affecting this great interest, and we commend to the Legislature a careful consideration of the plan of a State Board of Arbitration, of the principle of employers' liability, of the regulation of convict-labor, so that it shall not compete with the honest labor of the Commonwealth, and of more frequent payment of wages by corporations.

The Democratic State Convention was held in Worcester on the 7th of October. Its nominees were the following: Governor, Frederick O. Prince; Lieutenant-Governor, Henry H. Gilmore; Secretary of State, Jeremiah Crowley; Treasurer, Henry M. Cross; Auditor, James E. Delaney; Attorney-General, Henry K. Braley. The Prohibitionists and Greenback-Labor party also had candidates.

On Nov. 3 the Republican ticket was elected. The following was the vote for Governor: Republican, 112,243; Democratic, 90,346; Prohibition, 4,714; Greenback, 2,227; scattering, 138. The Executive Council, chosen at the same time, consists of 7 Republicans and 1 Democrat. In the Senate, there are 28 Republicans and 12 Democrats; in the House, 154 Republicans, 77 Democrats, 3 Independent Republicans, 3 Independents, 2 Greenback-Labor men, and 1 Independent Democrat.

For the proposed amendment to the Constitution, giving the Legislature power to divide towns into election precincts for State election purposes, 43,598 votes were cast for, and 8,673 against it. It was accordingly ratified.

At the municipal election in Boston, on the 15th of December, Hugh O'Brien, Democrat, was re-elected mayor, by a vote of 26,672 to 18,092 for Clark, Republican. The Board of Aldermen consists of 6 Republicans and 6 Democrats, and the Common Council of 31 Republicans and 41 Democrats. On the license question, the vote was: yes, 19,603; no, 10,284.

METALLURGY. Iron and Steel.—In his final report on the condition in which carbon exists in steel, made to the Institution of Mechanical Engineers in January, 1885, Sir Frederick Abel announced that the results of the experimental work appear to warrant the following conclusions in regard to characteristics recognizable by chemical examination, which are exhibited by different portions of one and the same sample of steel presenting marked physical differences consequent upon their exposure to the hardening, annealing, or tempering process:

"1. In annealed steel the carbon exists entirely, or nearly so, in the form of carbide of iron, of uniform composition, evenly diffused through the mass of melted iron.

"2. The cold-rolled samples of steel examined were closely similar in this respect to the annealed steel.

"3. In hardened steel the sudden lowering of the temperature from a high red heat appears to have the effect of preventing or arresting the separation of the carbon, as a definite carbide, from the mass of iron in which it exists in combination; its condition in the metal being, at any rate mainly, the same as when the steel is in a fused state. The presence of a small and variable proportion of Fe_3C in hardened steel is probably due to the unavoidable and variable extent of imperfection, or want of suddenness, of the hardening operation; so that, in some slight and variable degree, the change due to annealing takes place prior to the fixing of the carbon by the hardening process.

"4. In tempered steel the condition of the carbon is intermediate between that of hardened and of annealed steel. The maintenance of hardened steel in a moderately heated state causes a gradual separation (within the mass) of the carbide molecules, the extent of which is regulated by the degree of heating, so that the metal gradually approaches in character to the annealed condition; but, even in the best results obtained with blue-tempered steel, that approach, as indicated by the proportion of separated carbide, is not more than about half-way toward the condition of annealed steel.

"5. The carbide separated by chemical treatment from blue- and straw-tempered steel has the same composition as that obtained from annealed steel."

Microscopic examinations by Messrs. Osmond and Worth, of the Creuset Works, of cast-steel skeletonized by dilute nitric acid, have shown that the original distribution of iron and carbon in the metal was far from uniform, and that the steel is actually made up of small granules of soft iron separated from each other by partitions of another substance containing carbon, which is a carbide of iron. In other words, cast-steel may be said to possess a kind of cellular structure, in which the iron forms the nucleus and the carbide the envelope of the cell. The elementary cells so constituted, or simple cells, are aggregated in groups into so-called compound cells, which are divided from each other in the transparent sections by thin lines which are empty spaces. These lines form inclosed polygons which are of considerable size in cast-steel, but become smaller, and more and more broken and confused, in the metal that has been more or less perfectly forged. As the surfaces of the compound cells, after the action of acid, are represented in section by empty linear spaces, they must in reality be due to the contact of soft iron masses without the intervention of the carbide, in which case the compound cells are said to be deprived of envelopes. In another direction it is easy to see that the compound cells correspond to what is known as the grain of the steel, or their faces are regions of minimum cohesion, so that the fracture of a bar of steel may be defined as the surface which, in the particular part subjected to the breaking strain, contains the minimum of carbon. These observations apply only to steel that has been slowly cooled. By hardening, the compound cells disappear entirely, the constituent elements remaining being simple cells, but the interposed carbide of iron is much less abundant than in the same steel when annealed; the remainder of the carbide having separated as hydrate, which appears to be uniformly dispersed or dissolved in the mass of the metal. From the point of view of these experiments, forging has nothing in common with tempering in modifying the structure of steel; although the change produced in physical properties is somewhat similar.

The new Clapp - Griffiths process for the conversion of pig-iron into steel has been used at the works of Oliver Brothers and Phillips, Pittsburg, Pa., with satisfactory commercial results. It has the advantage of requiring a relatively small outlay, and promises, therefore, to be useful at points where it would not be expedient to establish large works, but where the demand is sufficient to justify the erection of minor furnaces. The converters used in operating the process are stationary, with removable bottoms, each holding from two to three tons. The blast, instead of entering through *tuyères* in the bottom of the vessel, as in the Bessemer process, passes into the converter through the sides at some little distance above the bottom. Having thus little resistance to overcome, blast at low pressure, furnished by cheap blowing apparatus, may suffice. Toward the end of the operation, and while the steel is being tapped out of the converter, the blast is admitted very slowly, to avoid "overblowing," and a hole is provided in the shell of the converter at such a height that the slag runs out through it during the converting operation. These changes, though they seem to be only mechanical modifications of the Bessemer process, have an important bearing upon the steel produced; for they cause, by the rapid oxidation of the iron, the almost entire elimination of the silicon. But the phosphorus is not removed, and its percentage is rather increased through the loss of metal in conversion. Yet this phosphoric steel is surprisingly ductile. The cost of conversion by this process is estimated at from $3 to $4 a ton at blast-furnaces, and about $6 a ton at rolling-mills. The cost of erecting the plant is small as compared with that of other processes; the steel is rolled with facility; the process permits the production of a high grade of steel from a cheap grade of pig-iron; and the operation of the plant does not require skilled labor.

The basic or Gilchrist-Thomas process for making steel (see "Annual Cyclopædia," 1882), has come into very extensive use on the Continent of Europe, where nearly one thousand tons of steel are made by it per week; and it is also beginning to make way in England. A number of important principles and details to be observed in manipulation have been established by experiment in its practical application. In order to make good steel by it, it has been found necessary to have in the material used from 1 to 2½ per cent. of phosphorus. If more than the larger quantity is present, too much iron is lost in effecting its removal; if less than the smaller quantity, the difficulties of operation become too great for the method to be profitable. There should also be not more than from 0·5 to 1·8 per cent. of silicon; and, as a rule, the less of this substance the better. The basic substances used for the refractory materials of the apparatus are shrunk dolomite for the lining, and magnesia, magnesite, bauxite, and chrome-iron for the points of contact between the basic materials of the hearth and the acid bricks of the roof. The outside of the furnace presents few novel features, but modifications of its interior are required on account of the high quality and price of the refractory materials, and of the chemical changes that are likely to take place between a roof which is necessarily acid and a hearth which must be basic. The roof must be separated from the hearth, both on account of these chemical changes, and to facilitate repairs. Roofs have been built of shrunk dolomite bricks and of magnesite, but they have not stood as well as the acid roofs of silica bricks—provided the junction between the basic and acid material has been properly made. The process produces a high quality of steel, which, when properly worked, will contain from 0·02 to 0·04 per cent. of phosphorus, from 0·01 to 0·03 per cent. of sulphur, and from none to 0·004 per cent. of silicon, with carbon varying from 0·06 to 0·45 per cent., from a material almost useless for any other process. No other process, it is said, can deal so well with pig and scrap iron containing irregular quantities of phosphorus and silica. About the same labor is required as in other processes; the output is equal to that of the acid process, and the results are just as certain, but the labor is more difficult, and the cost of the refractory materials and of repairs is greater.

Mr. Joseph Beasley has invented a new dephosphorizing process which may be economically and effectively employed in puddling-furnaces. Its essential feature is the use of a peculiar fettling, which is composed of one third of calcined tap-cinder (or "bull-dog," as it is termed) and two thirds of ore (or "Blue Billy"), ground to the condition of sand. This, mixed with 5 per cent. of dilute hydrochloric acid, is allowed to stand for three or four days, with frequent turning and incorporating; and to it are added shortly before use common salt and ground lime in quantities proportioned to the amount of pig to be puddled—usually from 20 to 30 per cent. These ingredients are thoroughly commingled, made into a stiff paste with water, and plastered over the ore or "bull-dog," which is placed around the furnace-bottom. Over this are thrown a few shovelfuls of a mixture composed of ground ore and ground hammer-slag, saturated with hydrochloric acid, prepared similarly to the first compound, to which lime and salt are also added. A dose of oxide of iron is administered toward the close of the puddling process. With this process the amount of iron obtained is from 5 to 10 per cent. more than by the old process; the metal is free from red-shortness, shows a highly fibrous fracture equal to that of the best-marked bars, and has a tensile strength of about 24 tons per square inch. By it the poorest pig can be worked up into first-class iron.

A process devised by Dr. Eames, for the production of iron directly from the ore without melting, has been put into successful experimental operation at Sing Sing, N. Y. It consists essentially in reducing iron-ore in a common reverberatory furnace, by mixing it with from 15 to 20 per cent. of impure graphite, and subjecting the charge—say of 500 pounds of ore and 100 pounds of graphite—to a moderate heat for 2½ hours. The heat is not sufficient to fuse the silicious gangue of the ore, or to reduce phosphorus; and the iron sponge is fully protected from oxidation by the carbon of the graphite.

It is known that wrought-iron or steel bars, after being first heated and then suddenly cooled, become shorter; cast-iron, on the other hand, increases in length, and copper behaves in a similar manner. Mr. Edmund Wehrenfennig has made experiments to determine the amount of increase or decrease that takes place. From them he learned that, with iron, greater results in diminution are obtained as a higher temperature is imparted to the metal, as the range of temperature is increased, and as the cooling is more rapid. The length of time during which the metal is subjected to a high temperature also greatly influences the amount of contraction. The form of the metal is an important factor; for wire appears to increase in length under the same circumstances in which bars seem to decrease. In the case of two iron plates, one 0·51 inch and the other 0·20 inch thick, the former decreased in length and breadth, but increased in thickness, while the latter increased in all its dimensions. While ordinary steel behaves in the same manner as iron, some steels, on being subjected to the heating treatment, neither decrease nor increase perceptibly in any of their dimensions. Experiments were made with copper and cast-iron with the results described above; while the behavior of brass was found to be similar to that of wrought-iron, but more marked.

A modification of the old Osmund or Catalan direct process for the dephosphorization of iron and steel in a charcoal-furnace, devised by Prof. Särnström, has been satisfactorily used at Nyhamma, in Sweden. Its essential feature is the immediate transfer of the mass from the furnace in which the process of conversion is going on, before the temperature has become so high as to effect coalescence or complete smelting, to a hearth where the further process of fusing the iron particles can take place. The furnaces are so constructed that the gases generated by the fuel may pass through the shaft and act the part of the gas in an ordinary blast-furnace. Charcoal and iron are charged, in proper proportions, in the shaft, where the iron-ore, as it settles, will be subject to the same process of conversion as in the ordinary reduction zone of blast-furnaces. When the proper stage of the process is judged to have been reached, the mass of iron, with a corresponding quantity of charcoal, is drawn out into the hearth, and proportionate quantities of iron and charcoal are charged in at the top, so that no intermission takes place in this part of the operations. The advantage of great ease in manipulation is claimed for this process, and such simplicity that even an unskilled laborer can be trained in a very short time to work in it. The iron produced by it is free from red-shortness and brittleness, and is of satisfactory elasticity.

Precious Metals.—Mr. R. L. Jack, in the report of the Queensland Geological Survey, describes a remarkable gold deposit on Mount Morgan, an isolated cone, rising from the plain through which runs the river Dee. The floor of the plain consists of primitive shales and quartzites, which are riven by dikes of rhiolite, and through these have come to the surface geyser-springs out of the deposit from which the cone of Mount Morgan has been formed. The water has, besides gold carried in solution, silica, iron, alumina, etc., but the gold seems to have been precipitated chiefly in the cup of the geyser, and to be richest in a large mass of iron-ore, which in the form of an inverted cone forms the axis of the mountain, and in the nodules of iron-ore that occur in certain soft cellular layers. These alternate with more or less ferruginous layers, all of which radiate, like the leaves of a fan, from the base of the cone, and inclose the iron-ore. Gold occurs in all the layers, except in a silicious earth, and therefore its association with iron is not accidental. The yield of the rock is exceedingly rich.

Dr. A. B. Griffiths has reported upon an assay of gold-ore from the vicinity of Constantinople that comes from mines which have not been worked for several centuries, and were thought to be exhausted of gold. The assay, both by dry and wet methods, gave 3 oz. 14 dwts. of gold per ton of ore. The gold in the ore contains iron and copper, and a very small quantity of silver. The matrix is composed chiefly of quartz, but contains calcium carbonate, ferric oxide, alumina, and lime.

In the Cassel process for the electro-chlorination of gold-ores, the crushed ore is simply mixed with common salt solution, or with sea-water. Chlorine is generated upon application of the electric current, whereby it is brought in contact with the ores in the nascent state. At the same time, nascent oxygen is also generated, which, oxidizing the sulphides, arsenides, etc., liberates the gold, while the nascent chlorine at once converts it into a terchloride. By a secondary action, hydrochlorous and hydrochloric acid are also formed, the latter of which, forming a soluble proto-salt with any iron that may be present, causes a precipitation of the gold as fast as the chlorine brings it into solution, and thus prevents its extraction. To counteract this difficulty, Mr. Cassel adds caustic lime to the primary mixture of crushed ore and salt, which neutralizes the hydrochloric acid as fast as it is developed, and prevents the formation of the objectionable iron compounds.

Mr. P. Manhès has taken out patents for a process by which he claims to extract gold and silver from copper mattes. The mattes are roasted, after grinding, with from one to three per cent. of ammonium chloride, in a muffle-furnace. The heat is to be kept so low that the matte shall not get red-hot, but all the ammonium chloride must be driven out. After this, the matte is not altered in appearance, but all the gold and silver are present in the form of chlorides, while the iron and copper remain as sulphides. The chlorides of the precious metals are then to be extracted by one or other of the well-known solvents.

According to M. Gaiffe, a microscopic examination of platinum wire shows that the wire is liable to break in drawing at points where no sign of injury exists before going through the draw-plate. After drawing, however, spots appear on the metal, which are supposed to be due to particles of dust that adhere to the metal as it is drawn, and scratch it. By carefully excluding dust-particles, M. Gaiffe has drawn wires $\frac{1}{1170}$ inch in diameter with ease, and he considers that with finer plates much finer wires can be produced.

Copper.—Mention was made, in the "Annual Cyclopædia" for 1883, of the application of the Bessemer process in treating copper mattes at Védènes and Eguilles in France. The same process has been introduced at Butte City, Mon., where a copper matte containing 72 per cent. of copper has been converted in twenty minutes in a single operation to black copper containing 98·9 per cent. of copper. The ores used at Butte City are sulphurets and are quartzose, and yield, on the general assay, about 12 per cent. of copper. They are separated at the mine into two classes; the first class very small in amount, containing about 22 per cent., and the second class containing about 9 per cent. of copper. The ore of the second class is crushed and concentrated at the furnace where the dressing-works are situated, up to about 18 per cent. of copper, and is then roasted in reverberatory furnaces. The process of treatment, as a whole, consists of a variable number of operations, depending on the size of the plant, and whether it is considered essential to go from the matte to the black copper in a single operation. It may consist of six, four, or, in certain cases, of three operations. It will generally differ a little for poor and for rich ores. The three operations, in the case of rich ores, consist simply of melting the ores without any previous roasting, treatment in the converter for black copper, and fining and refining in a reverberatory furnace. The poorer ores have, in addition, after the melting of the ore into a matte containing from 25 to 30 per cent. of copper, to undergo fusion of the matte, treatment in the converter to bring the matte up to 72 per cent. of copper, and a second fusion, before they are treated for black copper; thus necessitating two operations in the converter. All of the operations are simple, and are carried out at small expense for labor and fuel, but they require care and skill. The plant at Butte consists of a concentrator capable of enriching 150 tons of ore per day, which produces 75 tons of material; of six reverberatory calcining-furnaces capable of treating twelve tons each, consequently of roasting 72 tons, for treatment in the blast-furnace, which is capable of treating from 70 to 80 tons per day; and of six converters. The capacity of the converter for the treatment of mattes is much less than it would be for iron, because the matte yields more slags, and because, if the same quantity of matte as iron were treated, the slags would be projected from the converter. The amount of fuel consumed is 90 per cent. of the weight of the matte. As soon as the blast-pressure is put on, the temperature rises very rapidly from the combustion of the iron, sulphur, and other substances, all of which burn more readily than the copper. They must, however, be present in predetermined quantities to produce the best results. The oxides formed by the combustion are absorbed at once by the silica taken from the sides of the furnace. The process is generally finished in from twenty-five to thirty minutes. The black copper at Butte contains from 98 to 99·2 per cent. of copper, and is absolutely free from arsenic and antimony. The mattes, often containing arsenic, antimony, lead, zinc, and tin, can not be treated by any other process so as to make pure copper. The elimination of the arsenic and antimony, which are carried off by the high temperature of the blast and its intense oxidizing action before they have time to act upon the copper, is the most important result of the process. Zinc, tin, and lead are separated without difficulty; but nickel and bismuth are not separated, and cobalt only partly. The amount of coal required for this method is calculated to be about two thirds less than in the English method.

Mr. James Douglas, Jr., and Dr. T. Sterry Hunt have devised a new process for treating argentiferous copper-ores and furnace products. It is based upon the reaction between sulphurous acid and a solution of protochloride of copper, which gives rise to insoluble bichloride of copper with the elimination of one half the chlorine in the form of hydrochloric acid, and the formation of sulphuric acid. The resulting acid solution, when brought into contact with oxide of copper, will take up as much copper as it originally held, and this may, in turn, be thrown down by sulphurous acid. In this way the solution of copper from an oxidized ore, and its precipitation as dichloride of copper, may be continued indefinitely, provided chlorine be supplied each time by a sufficient amount of some soluble chloride to replace the loss in working. The solid dichloride of copper, if decomposed by iron, yields metallic copper and protochloride of iron. The sulphurous acid is obtained from roasting sulphurets or mattes. After the copper has been removed from the ore, the silver is extracted by leaching with brine, hyposulphite of soda, or Russell extra solution.

M. Manhès has received a prize from the Société d'Encouragement pour l'Industrie Nationale for the discovery of a new preparation of copper useful to the arts. He mixes 75 per cent. of copper and 25 per cent. of manganese, and adds the mixture in small quantities to the molten copper after refining. Copper thus treated, being more slowly acted upon by sea-water, is said to be of superior quality for sheathing ships' bottoms.

Lead.—The direct converter process for the reduction of lead-ores consists in calcining the ore, taking it hot from the calcining-furnace, and placing it in a converter—a large foundry ladle-like vessel, suspended on trunnions in front of a cupola-furnace. Cast-iron is then at once tapped out from the cupola, as hot as possible, and run on to the converter, in the proportion of from 50 to 80 per cent. of the weight of the ore charged. It is said that the melting and complete reduction of the ore take place instantaneously, the metallic lead sinks to the bottom, where it is covered by the liquid iron, and the slag, in a pasty condition, floats on the surface. The lead and iron are tapped off at the bottom, after which the slag is thrown out, and all is ready for a new charge. A portion of the iron used is converted into sulphide of iron by taking up the sulphur remaining in the ore, and this sulphide of iron is entangled in the slag. The iron not so consumed is cast into pigs, and is put through the cupola again to serve for working another charge.

Zinc.—A new method has been introduced by M. Piallat for dealing with the various forms of waste zinc resulting from the different manufactures in which the metal is used. The point aimed at is to get rid of the solder which is usually mingled with the clippings, and which spoils the zinc for direct uses. M. Piallat places his cuttings, etc., in a sort of basket, in which they can be subjected to heat and to centrifugal force at the same time. The actual basket-like container is surrounded by an outer envelope. Under the influence of the heat, which may be applied in the form of superheated steam or heated air, and the centrifugal action, the solder is melted, detached from the zinc, and driven to the exterior of the container, where it collects and is drawn off. The value of the solder alone, which is remelted and cast into bars, is sufficient, it is said, to pay all the costs of the operation. The zinc saved by this process, after being further purified by fusion, is very suitable for use in making small castings, and is sold at a relatively low price.

Alloys.—Mr. Richard Pearce, of Denver, Col., has described some new crystalline alloys of bismuth, gold, silver, and other metals. In the treatment of auriferous copper containing bismuth, globules were obtained of a grayish-white substance which proved to be bismuth containing in solution, as it were, a crystalline alloy of bismuth and gold, the crystals of which were separated by the action of nitric acid. Their composition is, gold, 69·94 per cent.; silver, 0·63 per cent.; and bismuth, 29·43 per cent. The melting of the residue with a flux gave a bronze-colored alloy having a specific gravity of 15·47, from which were separated by nitric acid gold-yellow crystals, having the composition 69 Au, 21 Ag. By remelting some of the original bismuth compound with a quantity of silver atomically corresponding with the quantity of gold in it, crystals were obtained of another alloy of gold and silver with a little bismuth and copper; and other alloys, but in smaller and less perfect crystals, of gold and silver were obtained, in all proportions, depending on the amount of silver used and the strength of the acid. Crystals of an alloy of gold and copper were obtained precisely in the same way by substituting copper for silver. Crystals were also obtained containing three metals, in the proportion—gold, 60·16; silver, 21·2; copper, 18·63. The experiments indicate that gold will not combine with bismuth if silver or copper is present in sufficient quantity. Experiments were also made in melting platinum and bismuth, the result of which was the production of a black crystalline powder. On the addition of copper, a jet-black residue of binoxide of platinum was obtained.

A new alloy, called "glass composition," introduced by Mr. Louis Dill, of Frankfort-on-the-Main, is said to possess the qualities of the best composition used for bearing surfaces. It contains a certain percentage of a vitreous substance which, expressed in figures, is very trifling, but is said to be sufficient to impart to the alloy a durability and uniformity not before reached. Even at a high rate of speed, the heating of journals is avoided and their unequal wear prevented. Its cost is less than that of other alloys of equal efficiency, and it is said to stand wear and tear remarkably well, even with a small amount of lubrication, and to be proof against atmospheric influence and the action of diluted acids.

M. Henri Vivarez finds in silicious bronze a conductibility comparable to that of copper, and a mechanical resistance greater than that of iron. The silicon may be introduced in various proportions, the mechanical resistance varying inversely as the conductibility. In telegraphy, galvanized iron wire, which weighs 155 kilogrammes per kilometre, can be replaced by wires of silicious bronze, weighing only 28 kilogrammes; and in telephony, iron wires of 25 kilogrammes can be replaced by wires of silicious bronze weighing only 8·45 kilogrammes.

M. Lecoq de Boisbaudran reports of his examinations of the alloys of indium and gallium, that the points of complete fusion are difficult to determine, because, from the beginning of the process, the fluidity increases gradually, while the metal remains more or less pasty. The first alloy, 2 In + Ga, is white, granulated, and easily sliced with a knife. In + Ga is also white and nearly solid, but much less hard than the preceding alloy. In + 2 Ga is soft, pasty, and white. In + 4 Ga is white, and begins to melt at 16·5° C., at which temperature the other alloys are hard. It is liquid at 50° C., while the first alloy, the hardest of the series, is viscid at 75° C.

Processes.—Messrs. E. H. and A. H. Cowles, with Prof. C. F. Mabery, of Cleveland, Ohio, have successfully employed a method for the reduction, on a commercial scale, of various metals by the direct application of electricity. The principle on which their process depends is that of producing an extremely high temperature by introducing into the path of the electric current some material affording considerable resistance. Coarsely pulverized carbon was found to be such a material, and to have the further advantage of being the most available substance by the aid of which to effect the reduction of oxides. When this material, mixed with the oxide to be reduced, was made a part of the electric circuit in a fire-clay retort and submitted to the action of a current from a powerful dynamo-machine, the oxide was reduced, and the temperature was increased to such an extent that the whole interior of the retort fused completely. In these experiments, lumps of lime, sand, and corundum were fused, with indications of the reduction of the corresponding metals; and on cooling, the lime formed large and well-defined crystals, and the corundum beautiful red, green, and blue octahedral crystals. Further experiments discovered that the intense heat thus produced could be utilized for the reduction of oxides in large quantities. It was also found that the fire-brick walls of the furnace would have to be protected from the heat; and this was done by packing the cone of carbon and ore in pulverized charcoal. In the apparatus now employed by the Messrs. Cowles, a column of fragments of well-calcined charcoal mixed with the ore is imbedded horizontally in finely pulverized charcoal and covered by a layer of more coarsely broken charcoal, while the whole is placed in a box of fire-brick, covered with perforated tiles and opened at the ends to admit two carbon electrodes an inch and a half in diameter. Through these the current from a dynamo-electric engine of thirty horse-power is made to traverse the central core of ore and carbon. The apparatus also includes a "resistance-box" to protect the machines from the variable resistance within the furnace. With this furnace, aluminum, silicon, boron, manganese, magnesium, sodium, and potassium are reduced from their oxides with ease. In fact, no oxide, it is said, can withstand temperatures attainable within it. In September, 1885, a small experimental plant, then running with a dynamo of thirty horse-power, was producing daily more than five pounds of aluminum in the form of a rich and brittle alloy, which, by suitable additions of copper, is converted into different grades of aluminum bronze, and these were offered for sale at Cleveland on a basis of five dollars a pound for the contained aluminum. The reduction of silicon is even more easy than that of aluminum. When silicious sand is mixed with the carbon in the resistance-column, a part of it is fused into a clear glass, and a part is reduced, with the production of a considerable mass of crystallized silicon, a portion of which is revolatilized and reconverted into silica. By adding copper, a hard brittle alloy is formed, containing 6 or 7 per cent. of silicon, from which silicon bronzes can be cheaply made. The direct reduction of clay gives an alloy of silicon and aluminum, and with copper, a silicon-aluminum bronze which appears to possess exceedingly valuable properties. Boric oxide is rapidly reduced, with evolution of brown fumes, and the formation in presence of copper of a boron bronze. Under certain conditions crystals supposed to be of what is called adamantoid boron are formed. In some cases charcoal has been converted into graphite by the action of the furnace.

A successful method of giving a silver surface to iron is employed by a manufacturer in Vienna. His plan is first to cover the iron with mercury, and then to silver by the galvanic process. On heating to 300° C., the mercury evaporates and the silver layer is fixed. To save silver, the ware can be first covered with a layer of tin. Ware thus covered with tin chemically pure, and silvered, is said to be much less costly than any other silvered metal.

The New Haven (Conn.) Wire Company has exhibited a wire galvanized by a new process, in which, it is claimed, by means of a thorough union of the coating with the body of the wire, scaling is prevented, and a smooth, firm surface is secured under all circumstances. Softness and tensile strength and uniformity of temper are said to be obtained to an extraordinary degree. One of the features of the process is the use of a diminished quantity of acid.

A simple method of bending cast-iron without danger of fracture has been found to be by the judicious application of heat, the degree of which may not be very high, with moderate pressure. The heads of leaders or spoolers in a cotton-mill were given a decided curvature by heating the straight casting in the flame of an alcohol-lamp. After the under side of the casting had been heated to a degree that would have drawn hardened steel to a straw-color, a pressure by weighted lever was introduced upon the upper side. As the lamp was moved from point to point, it was surprising to see how the iron yielded to the pressure and the heat. A crooked casting was likewise straightened by the careful use of two gas-flames diffused by wire-netting, and of weight suitably applied.

Apparatus.—Mr. James Riley has been experimenting with a cupola-furnace, which he has devised to aid in shortening the duration of the operations for making open-hearth steel. His aim was to reduce the time required for charging the furnace, and this he sought to accomplish by having the metal to be charged ready, in the fluid state, to be run directly into the furnace. The result of his efforts is the construction of a cupola-furnace, in which gaseous is substituted for solid fuel, the gas-generator being dependent for its operation upon a forced blast obtained from an ordinary blower, while the air for supporting combustion in the body of the furnace is also obtained from the blower. From the preliminary experiments he has performed, with improvised and imperfect apparatus, he believes that, when the fluid metal can be charged into the open-hearth furnace, the time required for its conversion into mild steel will be very greatly shortened.

In view of the success of European experiments in melting iron and steel with gases resulting from the decomposition of steam by incandescent coal, Mr. N. Lilienberg and Mr. George S. Dwight have devised a plan for producing and burning those gases in a manner economical and efficient for metallurgical purposes. Their apparatus is so adjusted that the air and the water-gas in a pre-heated state meet under an oblique angle and create an intensely heated flame, which is turned directly on the metal in the deepest part of the bath; and they pass also toward the furnace, through channels in which the heat gradually increases as the furnace is approached.

Several improved coke-ovens have been brought to notice, in the construction of which provision is made for saving the by-products of the coking process. In the oven built on the François system, as used in France and Belgium, the furnaces have in the side-walls vertical flues, and the gases are carried off from under the beds through ports. The Coppée oven is by its small width and the arrangements of its channels especially suited for poor coals. Among its other characteristics are combustion of gas by double admission of air, with entire suppression of smoke; the collection of all the hot gases in a large conduit and their utilization for heating boilers; and galleries for cooling and preserving brick-work. A largely increased yield is secured with this oven, which is rated at 70 tons of coke for every 100 tons of coal burned.

In designing the Jameson oven, the inventor has had in view to use the ordinary bee-hive oven, with some alterations and additions, and to employ a portion of the highly heated coal charge for giving the requisite heat, and obtaining the highest degree of heat for coking. For the purpose of collecting the waste products, the oven bottom is perforated and provided with a cast-iron suction-pipe. When the exhauster is started, it carries the nascent products of distillation, and all gaseous products resulting from the process of coking, through condensing-pipes, settling-tanks, etc., so as to recover the ammonia, light and heavy oils, and tarry products, from which many beautiful dyes are manufactured. The gas, in a very pure state, is the last residual product passing away. It can be used for heating and lighting.

It is claimed for the Simon-Carves oven that it possesses the economical advantages of all the other designs of ovens, and provides a more extensive detail than any other apparatus for the saving of all available by-products. It aims, in a higher degree than is done in any other oven, at the utilization of the waste products and at a greater yield in percentage of coke, and is extremely expeditious. It consists of a number of long, high, and narrow chambers, or ovens, of brick-work, built side by side, with partition-walls between them, sufficiently thick to contain horizontal flues. Flues are also formed under the floor of each oven. Thus the oven is not only heated at the bottom, but also evenly at the sides, and the coal becomes rapidly and completely coked. Through the middle of the roof is extended a gas-pipe, provided with a hydraulic valve, through which the volatile products of distillation rise and are led through a range of externally cooled pipes.

Mr. F. W. Gordon, of Philadelphia, claims for the Gordon converter, of which he is the inventor, that in it intensity of chemical action is removed from the lining, whereby the durability of the same is insured; that the tuyères are readily replaced; that they may be withdrawn instantaneously and simultaneously, without complications of construction; that it requires only a mild blast, whereby expensive blowing machinery is avoided; that it secures a reduction of carbon and silicon to any desired extent, even to totality; that it is readily accessible for repairs in every part; that the cost of its construction and maintenance is low; that by it the best steel is produced from high-grade pig-irons, Bessemer steel from ordinary pig-irons, phosphorus steel from common pig-irons; and chilling irons, malleable irons, strong machinery irons, and semi-steel and steel castings from ordinary grades of mineral-fuel pig-irons. The special features of the converter are the durability of the sides and bottom, and the tuyère, which dips into the bath through side-holes piercing the shell, and is moved into and out of the metal, automatically, by the action of the blast.

In the Davy process, devised by Mr. Alfred Davy, of Sheffield, the converter is simply the foundry-ladle, or a vessel of similar construction. Into this vessel, which stands on the floor, is introduced a straight pipe or tuyère, to which is attached the ladle-cover. The tuyère is connected with the blowing apparatus, and may be raised or lowered into the ladle by means of a hydraulic crane; or the pipe and lid may be stationary, and the ladle raised until the tuyère is below the surface of the metal. An opening on one side of the cover allows the hot gases, made during the blow, to escape. Mr. Davy claims to be able, with his apparatus to make steel with 80,000 pounds tensile strength, and 20 per cent. elongation; that such steel will not cost more than from $20 to $22 per ton, pig-iron being rated at $15; and that the cost of the apparatus for producing one ton at a time, will be only $3,000.

In the Avesta process, which is described by Prof. Josef von Ehrenwerth in the "Oesterreichische Zeitschrift" for 1884, the converter is suspended on trunnions, like the ordinary Bessemer converter, but, instead of the expensive hydraulic machinery used in turning, it is turned by one man by means of a crank. The converter in use is only 1·4 metre high and one metre in diameter. The holes from the tuyères cover an area equal to that of a circle 200 millimetres in diameter. There are ninety holes, from about 3 to 3½ millimetres in diameter, and the area is so calculated that after the blast has passed through the metal there is little or no free oxygen left in the escaping gases. The charge weighs from 170 to 765 kilogrammes, and only eight tenths per cent. of 70 per cent. ferro-manganese is used to recarbonize. The pressure of the blast is 1·04 kilogrammes to the square centimetre. The bottom of the apparatus is forced into place by a screw arrangement, and can be detached and replaced.

Magnesite, a native carbonate of magnesia, is being introduced into England as an extremely refractory substance for lining furnaces. It comes from Styria, Austria, where large deposits have recently been discovered. It is chiefly employed, after being dead-burned, in the form of magnesia-stone for furnace-bottoms. Furnaces lined with tiles of this stone can be worked three turns in twenty-four hours, and continuously for six or seven months; and so powerful is the magnesite that iron containing as much as 3 per cent. of phosphorus can be effectually treated in such furnaces, and made to turn out a material equal to the best Swedish steel.

METEOROLOGY. Under a system of observations organized by Lieut. John P. Finley, of the United States Signal Service, a great advance has been made in our knowledge of the character and movements of tornadoes, and it has become possible to predict with some approach to accuracy, a few hours beforehand, when any region in the settled parts of the country is about to be visited by a storm of this character. Lieut. Finley adopted the practice, whenever a tornado occurred, of sending to postmasters or other officers, to be given to competent persons who would supply the information requested, blanks, with questions respecting the prominent features of the phenomena, and the more important circumstances attending their appearance. The Signal-Service Office has now upon its books the names of more than 1,500 observers east of the Rocky mountains, the most of them in the States which are most frequently visited by destructive tornadoes. Lieut. Finley has divided the country east of the Rocky mountains into 18 districts, for which he makes predictions with a degree of accuracy which has steadily increased since they were begun. During 1884, of 3,228 predictions unfavorable to tornadoes, which were made as assurances of safety to the people of the several districts, 3,201 received positive verification. A more trying test is that of actual success in predicting tornadoes, and in this certainty is lessened by the fact that with the present limited resources of the Signal Service the reports are defective or wholly wanting from sparsely settled regions. Lieut. Finley found that of 38 predictions that tornadoes would occur, made in April and June, 1884, 18 were verified, and of 19 made in June and July, 1885, 15 were generally verified. In all cases there were violent storms, either tornadoes, hurricanes, or hail. Many predictions may seem to fail, though they are really fulfilled, through the limited extent of the phenomenon, which in a treeless, thinly settled prairie might escape observation. The conditions favorable to the development of a tornado are positive and noticeable, and consist, according to Lieut. Finley, generally in a departure of from 15° to 50° from normal conditions of temperature, accompanied by abnormal conditions of humidity, pressure, wind-direction, and cloud formation and movement. A remarkable and interesting feature in the case is that the tornadoes nearly always form southeast of a moving center of low pressure, and their tracks, conform closely to the progressive direction of the main storm. The average number of tornadoes occurring yearly in the region east of the Rocky mountains is more than a hundred. The number in 1884 was 172. Of 600 tornadoes which are recorded as having occurred between 1794 and 1881, 304 moved from southwest to northeast, and the remainder, with very few exceptions, kept close to that direction. So comparatively certain has this movement been found to be, that the tornado-track can be escaped by running southeast from its center. It is not quite so safe to run northwest, on account of the northward motion of many of the storms. The average width of the storm-path is 1,085 feet, and the velocity of progression is 30 miles an hour. The form of the cloud is nearly always funnel-shaped, varied at times with the forms of the hourglass, cone, and inverted funnel, modifications which are caused by different altitudes and velocities of air-currents. It is estimated that in the center of the funnel the air sometimes attains a speed of 2,000 miles an hour. The whirling movement is almost invariably in an opposite direction from that taken by the hands of a clock. Though the tornadoes pursue a course parallel to that of the storm-center, by the side of which they are formed, they are developed at a distance of several hundred miles from it, and keep at that distance. They are generally formed under conditions of partial sunshine and cloudiness and high humidity.

The "sun-glows," or "red sunsets," which were so conspicuous all over the world during the winter of 1883–'84, have recurred from time to time since then, with various degrees of intensity and persistence. Prof. Kiessling, of Hamburg, has made a series of experiments in illustration of the phenomena by the artificial formation of all manner of sunset effects, from which he has deduced the law that "an intense purple glow, visible over a considerable area, may occur when, in close proximity beneath a lofty and highly attenuated haze, there is formed an extensive stratum of air at considerably higher temperature." His paper on this subject contains a series of comparisons tending to show that the conditions under which his artificial glows were produced have actually existed whenever the remarkable sunset effects have made themselves prominent.

The phenomenon known as Bishop's Ring, which was first noticed in the latter months of 1883, is supposed to have the same origin as the red sun-glows described in the "Annual Cyclopædia" for 1883. It may be described as a corona of dusky, coppery, or reddish light surrounding the sun and visible at noonday. The circle of most distinct color has a radius of about 15°, and incloses a brilliant silvery or bluish glow close around the solar disk. As described by Dr. Kremser, who observed it from the Schneekoppe, in Prussia, "in remarkable completeness," in January, 1885, the space for about 10° around the sun was of a brilliant white, and this passed through yellow and yellow-brown into the copper-colored ring, 6½° broad. At the point where it touched the horizon, the two limbs showed different tints. The ring was plainly to be seen on clear days during the winter of 1884–'85, and during the latter months of 1885; but the hazy days of summer are not favorable to its visibility. It is best seen from elevated stations. The numerous observations of the phenomenon in Europe and America all point to the conclusions that it is produced in the upper atmosphere, and that it was continuously present above the cloudy or dusty lower air over a large part if not over the whole of the earth throughout 1884 and 1885. It is explained as a relatively simple effect of diffraction, of the same nature as that which is seen in the colored rings surrounding a light looked at through a faintly frosted glass. Colored coronal rings may be seen also around a light when looked at through a glass strewed lightly over with spores of lycopodium. Kiessling's experiments with thin artificial clouds, through which the sun appears surrounded with coronal rings, are of similar character. The moon is often surrounded with similar rings of small diameter, probably on small floating particles of ice. These rings are different from halos, which are of definite and much larger diameter, and are, when seen around the moon, generally whitish; when formed around the sun, visibly colored with red inside. The first recorded observation of the new corona was made by the Rev. Sereno F. Bishop, after whom it is named, at Honolulu, Hawaii, on Sept. 5, 1883. It was first seen in the United States by Prof. John Le Conte, at Berkeley, Cal., on the 24th of November of the same year; and in Europe on the days following. The near coincidence of these dates of observations with those on which the red sunsets were first noticed in the same regions suggests a community of origin for the two phenomena; and the recognized fact that both could be produced by a sufficient supply of extremely fine solid or liquid dust scattered through the atmosphere points to the same conclusion, and tends to corroborate the theory that ascribes them to the volcanic dust of Krakatoa. The objections to the theory, based upon the quantity of dust that would be required to produce them, and the difficulty of conceiving it to remain afloat so long, are not insurmountable. Experiments by Tyndall suggest that the quantity of dust may really be insignificant in proportion to the mass of the atmosphere; and, given dust of the extreme tenuity that volcanic ashes are known to be, they would evidently be a very long time in settling. The action of these particles of dust, if such they be, would, moreover, be re-enforced by the office they are known to perform of serving as nuclei for the condensation of aqueous vapor, by which their diffraction-effects would be increased. We have, therefore, still liberty to believe that the intense red sunsets of 1883–'84 were caused primarily by the injection into the air of immense masses of dust and vapor from Krakatoa; that their gradual diminution corresponded with the slow settling down of the particles; until, at length, the brilliancy of the display has been lost, and the moderate residual of the dusts and vapors produces nothing more than a fainter colored ring and sunset glows that are visible only under especially favorable circumstances.

The United States Signal-Office has compiled a series of charts showing the relative frequency of storms for each month and for the year, in that part of the northern hemisphere for which the data are available. They are the results of observations extending through one hundred and thirty-four months, from 1863 to 1883. For the whole year, the region where storms occur with greatest frequency is a belt of about two hundred miles in width, extending from the head-waters of Red river, about 95° west longitude, eastward through the Great Lakes to the mouth of the St. Lawrence, about 70° west longitude. Surrounding this is a more extensive region where the number of storms, though not so large, is still a good way over the average; and again, surrounding this latter, is a still wider region, stretching from 105° west longitude eastward through the States and Canada, and through the Atlantic as far as 20° west longitude. This is one of the most important regions of the globe as regards storms or cyclones. Another region of considerable storm frequency extends from the south of Greenland, through Iceland and Faroe, to the north of Sweden. This distribution prevails particularly during the cold months, when the larger number of storms occur. In the spring and summer months the distribution is materially altered. Thus, in April the regions of greater frequency extend farther southward in the United States and the Atlantic. This southing of the tracks of the cyclones is still more distinctly marked in Europe. It is shown in Dr. Neumayer's (Hamburg) "Physical Atlas of the Atlantic Ocean," prepared in 1882, that most of the storms in the United States originate west of the Mississippi; that many of the Atlantic storms have their origin in the Gulf of St. Lawrence; and that the storms of northwestern Europe chiefly originate in mid-Atlantic and to the southwest of Ireland. The centers of low pressure on these charts also point to a retardation in the onward course of storms on advancing over large masses of land, as happens when storms approach the south of Greenland, the south of the British Islands, Denmark, and the Lofoden Isles. Of all storm-tracks approximately known in the northern hemisphere the one most frequently taken is that by the storms of the United States, which pursue an easterly course through the Atlantic toward Iceland and the North Cape. Among the tracks less frequently followed, but of great importance commercially and otherwise, are those from New Orleans, along the east coast of the United States, toward Nova Scotia; from mid-Atlantic to the south of Ireland, and thence through Europe to the northern shore of the Mediterranean.

A system of observations for determining the height of clouds has been instituted at the Upsala Observatory, Sweden. Two observers with theodolites select as nearly an identical a point in the cloud as they can, and take the angle as nearly as possible at the same moment. The method is liable to serious errors from the difficulty of hitting upon the same point and making the observations simultaneous, which have to be allowed for. The following heights have been arrived at for the several kinds of clouds:

Stratus		625	metres.
Nimbus (lower)		1,115	"
Nimbus (higher)		2,185	"
Cumulus and cumulo-stratus	top	1,690	"
	base	1,370	"
	mean	1,438	"
Lower alto-cumulus		1,988	"
Higher alto-cumulus		4,242	"
Cirro-cumulus		5,513	"
Cirrus		6,823	"

The authors point out that, according to their observations, there are seven levels, each one occupied by a different species of cloud, viz.: 600, 1,100, 1,500, 2,000, 4,200–4,600, 5,800–6,600, and 8,000–8,600 metres; and these levels agree with those deduced by M. Vettin, of Berlin, from a different mode of observation.

Mr. H. Allen Hazen, in a communication to the "American Meteorological Journal," on the subject of thunder-storms, predicates that they may be divided into common storms with light winds, more or less rain, and generally not very heavy thunder; those preceded or attended by a high and sudden wind; and those that may be termed electric storms, mostly experienced in the West, of which little has been written or is known up to the present time. As to this third class, it is alleged that storms occur in the West with heavy electric discharges, and more or less wind, but no rain. These storms the Signal Service proposes to investigate most carefully, particularly since, if it be conclusively shown that thunder-storms occur unaccompanied by any rain, a contribution of no ordinary importance will be made to the theory of the phenomenon.

According to the report of the Meteorological Service of Canada for 1884, recent investigations on the subject of the climatic relations of Canada to European countries show that the Dominion has the latitudes of Italy, France, Germany, Austria, the British Islands, Russia, Sweden, and Norway, and has as many varieties of climate as have those countries. There is greater cold in winter in many of the latitudes of Canada than in corresponding latitudes in Europe, but the summers are about the same. The most southern part of Canada is on the same parallel as Rome, Corsica, and the northern part of Spain, and it is farther south than France, Lombardy, Venice, or Genoa. The northern shores of Lake Huron are in the latitude of central France; and vast territories not yet surveyed lie south of the parallel of those shores, where the climate is favorable for all the great staples of the temperate zone.

In a series of photographs of lightning-flashes exhibited to the Berlin Academy by Dr. Kayser, the lightning is shown to have gone very often from one point to several, and presents an aspect, but in an inverse sense, like that of a river with numerous tributaries. The weak flashes did not so branch out. In one remarkable effect the stem consists not of one bright line only, but of four lines parallel throughout, the second being rather a band, and stratified transversely. Dr. Kayser believes that this represents an oscillating discharge, like those which may sometimes be observed by the eye in violent thunder-storms.

The Exhibition of Instruments of the Royal Meteorological Society for 1885 was devoted to the exposition of sunshine recorders and solar and terrestrial radiation instruments. The first attempt at obtaining an instrumental record of the amount of sunshine was made by Mr. J. F. Campbell, of Islay, in 1853. He mounted a hollow glass sphere filled with acidulated water, in the center of a cup of mahogany, so arranged that the sun's rays were focussed on the interior of the cup and burned it. The lines of burning, therefore, indicated the existence of sunshine. Solid glass spheres have been substituted for hollow ones, and cards in metal frames have replaced the wood; but the principle of the instrument has not essentially changed. Other modes of recording sunshine are based on the action of the actinic rays of the spectrum. Mr. J. W. Clark's radiant energy recorder depends upon the evaporation of water *in vacuo*, and has the advantage that its indications are readily expressible in heat-units. Its simplest form may be represented by a modification of Wollaston's cryophorus, in which the bulb containing the water to be evaporated is blackened, and is then exposed to the sun, while the rest of the apparatus is silvered or protected by bright sheets of tin. At sunset, the quantity of water which has distilled over can be read off on the graduated tube by which the vertical tube and lower bulb of the original instrument is replaced.

METHODISTS. General Summaries.—The following are general summaries of the Methodist churches in the United States and other countries, compiled from their several statistical reports for 1884:

CHURCHES.	Itinerant ministers.	Local preachers.	Lay members.
I. Episcopal Methodists in the United States:			
Methodist Episcopal	12,811	12,211	1,787.339
Methodist Episcopal, South	4,045	5,869	877,299
African Methodist Episcopal	1,882	9,760	391,044
African Methodist Episcopal Zion.	2,000	2,750	300,000
Colored Methodist Episcopal	638	683	125,000
Union American Methodist Episcopal	40	40	8,000
Total	21,414	31,313	3,483,682
II. Non-Episcopal Methodists in the United States:			
Methodist Protestant	1,500	1,010	130.000
American Wesleyan	267	215	23,590
Free Methodist	263	326	12,716
Primitive Methodist	27	162	3,716
Independent Methodist	23	27	5,144
Congregational Methodist	..	23	20,000
Total	2,080	1,763	195,169
III. Methodists in Canada:			
The Methodist Church	1,628	1,959	168,803
IV. Methodists in Great Britain, and Missions:			
British Wesleyan Methodists in Great Britain	1,917	14,183	445,638
British Wesleyan Methodists in missions	365	....	78,066
Primitive Methodists	1,044	15,982	191,108
New Connection Methodists	215	1,271	38,819
Wesleyan Reform Union	15	....	8,771
United Methodist Free Churches	415	3,330	83,469
Bible Christians (including Australia)	174	1,909	23,846
Total	3,927	36,675	864,717
V. Wesleyan Affiliating Conferences:			
Irish Wesleyan Conference	237	....	25,457
French Wesleyan Conference	31	127	2,026
Australasian Conference	483	4,480	74,391
South African Conference	183	....	31,522
Total	934	4.607	133,396
Grand total of Methodists and missions in 1884	29,895	76,317	4,845,687

I. Methodist Episcopal Church.—The following is a general summary of the statistics of the Methodist Episcopal Church, as they were reported to the "Fall Conferences" of 1884 and the "Spring Conferences" of 1885:

Number of conferences and missions, 116; number of traveling preachers, 11,676, of whom 9,122 are returned as "effective," 1,041 as "supernumerary," and 1,513 as "superannuated"; of preachers on trial, 1,349; of local preachers, 12,397; of members in society, 1,659,816; of probationers, 196,028; total members and probationers, 1,855,844; number of baptisms, 62,848 of children and 73,756 of adults; number of churches, 19,384, having a probable value of $74,833,142; of parsonages, 6,918, having a probable value of $10,600,612; number of Sunday schools, 22,246, with 241,859 officers and teachers, and 1,786,919 pupils. Amount of conference collections: For missions, $654,653; for Woman's Foreign Missionary Society, $133,367; for Woman's Home Missionary Society, $8,035; for church extension, $116,785; for the Freedmen's Aid Society, $70,500; for education, $180,296; for the American Bible Society, $29,511; amount contributed for ministerial support, $7,792,407; for conference claimants, $180, 336; amount paid for church-building and improvements, $4,131,831; amount paid on old indebtedness on church property, $1,159,948.

The two "Book Concerns," or publishing-houses—the one in New York, and the Western Book Concern at Cincinnati—returned in their reports, made in February, 1885, a combined net capital of $1,748,912; profits for the fiscal year, $131,461; and total sales for the year, $1,701,027.

The educational institutions under the care of the Church or its conferences and benevolent societies, include 10 theological institutions; 45 colleges and universities; 61 classical seminaries; 8 female colleges and seminaries; and 19 foreign mission schools. They return in all, $7,584,640 of real estate, $7,031,176 of endowment funds, $592,474 of indebtedness, 1,405 teachers, 28,591 students for the year, and 413,906 students from the beginning.

Church Extension.—The General Committee of Church Extension met in Philadelphia, Nov. 12. The Treasurer of the Board of Church Extension reported that his receipts for the year had been, on general account, including the balance from the previous year, $171,745; on the loan-fund account, $114,482; and that his disbursements had been, on the general account, $131,346; and on the loan-fund account, $105,100. The board had aided, by donations or loans, or both, 494 churches with $76,275, and had on hand applications asking for $37,150. The estimates adopted for the ensuing year contemplate the collection and application of $180,000.

Freedmen's Aid Society.—The eighteenth anniversary of the Freedmen's Aid Society was held in the city of New York, Nov. 6. The treasurer reported that his total receipts for the year had been $143,752, and his expenditures $174,752. The excess of $31,000 in expenditures had been occasioned mainly by the purchase of grounds for the university at Chattanooga, Tenn. Twenty-two schools had been maintained among the colored people, and eighteen schools among the whites. These schools returned in all, 167 teachers and 5,952 pupils, of whom 4,243 were colored and 1,709 white.

Biblical classes were conducted in all the colleges of the society. Two new buildings had been completed for the school at Winsted, on Bayou Teche, La.; a second building was in course of construction for the Gammon School of Theology, Atlanta, Ga.; and a contract had been let for a new college building in New Orleans, La. The Gammon Theological School returned 40 candidates for the ministry as in its classes. Meharry Medical College had graduated more than 50 physicians, and had 41 undergraduates in attendance. The industrial departments of the schools had proved very useful. In aiding schools among the whites, the policy had been pursued of sustaining central universities at Little Rock, Ark., and Chattanooga, Tenn., and establishing seminaries at other places to be feeders to them.

Missionary Society.—The General Missionary Committee of the Methodist Episcopal Church met in New York city, Nov. 5. The bishops presided by turns over the several sessions of the body. The Treasurer of the Missionary Society reported that his receipts for the year had been $825,828, and his expenditures $867,513, leaving the treasury in debt $40,685. Appropriations were made as follows for the missionary work of the Church during the ensuing year.

I. FOREIGN MISSIONS:	
1. Africa	$7,000
2. South America	29,075
3. China	93,774
4. Germany and Switzerland	24,600
5. Scandinavia	51,794
6. India	83,700
7. Bulgaria and Turkey	14,100
8. Italy	29,739
9. Mexico	43,038
10. Japan and Tokio University	54,600
11. Corea	9,311
Total for foreign missions, besides $8,000 appropriated conditionally	$439,796
II. MISSIONS IN THE UNITED STATES, NOT IN ANNUAL CONFERENCES, TO BE ADMINISTERED AS FOREIGN MISSIONS:	
Arizona, the Black Hills, Indian Territory, Montana, Nevada, New Mexico, North Dakota, Utah, and Scandinavian work	$73,200
III. DOMESTIC MISSIONS:	
1. Welsh	$200
2. Scandinavian	31,800
3. German	46,700
4. French	1,500
5. Chinese	15,500
6. American Indian	5,950
7. Bohemian	2,800
8. English-speaking	203,650
Total domestic missions	$308,100
IV. MISCELLANEOUS APPROPRIATIONS	$88,019
For liquidation of debt	90,885
Total of appropriations for foreign and domestic missions, etc.	$1,000,000

The following are summaries of the statistical reports of the missions for 1884, the latest date to which the reports have been made up:

Foreign Missions.—Number of missionaries and assistant missionaries, 358; of missionaries of the Woman's Foreign Missionary Society, 47, who employ 328 native women; of native preachers and teachers, 1,305; of foreign teachers, 27; of other helpers, 199; of members, 34,442, with 11,965 probationers and 45,836 adherents; of baptisms during the year, 1,302 of adults and 2,023 of children; of day schools, 529, with 16,868 pupils; of Sunday schools, 1,353, with 62,810 pupils; of high schools, 15, with 75 teachers and 1,019 pupils; of theological seminaries, 7, with 19 teachers and 85 students.

Domestic Missions.—Number of missionaries and assistants, 207, with 8 Chinese and Indian preachers; of local preachers, 84, with 31 teachers and 16 other helpers; of members, 10,208, with 1,509 probationers and 2,881 attendants on worship; of baptisms, 422 of adults and 572 of children; of day schools, 31, with 1,944 pupils; of Sunday schools, 311, with 14,101 pupils.

II. Methodist Episcopal Church, South.—The following is a summary of the statistics of the Methodist Episcopal Church, South, by conferences, as they are given in the "Annual Minutes," published in May, 1885:

CONFERENCES.	Traveling preachers.	Local preachers.	Total of members.
Alabama	153	186	34,465
Arkansas	93	226	17,807
Baltimore	198	111	33,853
Columbia	23	31	1,469
Denver	26	12	927
East Texas	72	136	16,848
Florida	89	124	12,593
German Mission	23	18	1,319
Holston	187	311	45,679
Illinois	47	41	5,025
Indian Mission	46	121	7,259
Kentucky	117	95	22,958
Little Rock	100	176	19,586
Los Angeles	28	17	1,177
Louisiana	88	79	15,452
Louisville	153	185	33,142
Memphis	141	251	36,567
Mississippi	128	141	26,799
Missouri	138	140	26,688
Montana	9	6	262
North Alabama	139	374	41,831
North Carolina	225	240	75,535
North Georgia	236	411	71,628
North Mississippi	141	157	32,091
North Texas	134	258	30,495
Northwest Texas	153	285	28,777
Pacific	71	41	4,477
South Carolina	184	135	52,627
South Georgia	146	204	36,892
Southwest Missouri	116	151	21,671
St. Louis	74	95	12,604
Tennessee	204	318	48,985
Texas	85	115	12,894
Virginia	221	141	62,194
Western	28	33	2,917
Western Virginia	72	119	17,260
West Texas	111	109	10,414
White River	73	153	15,160
China Mission	24	26	213
Brazilian Mission	5	4	140
Mexican Mission	13	82	2,647
Bishops	5	..	5
Total	4,319	5,858	941,327

The "total members" includes the probationers. Under the same heading are included 925,290 white members, 504 colored members, and 5,356 Indian members. Number of baptisms during the year, 30,624 of infants, and 50,567 of adults; number of Sunday schools, 10,268, with 67,869 teachers and 530,585 pupils. Amount of collections: for conference claimants, $86,677; for missions, $245,722. The increase of members in this Church from

1881 to 1885 has been 130,000. The increase for 1885 is estimated at 50,000.

The receipts of the Board of Missions for the year ending March 31, 1885, were $191,600; the addition to this of the sum of $83,063 paid in the several conferences for domestic missions gives the total mission income of the Church as $274,663. The board conducts foreign missions, or missions among foreign populations in China, among the Indians, among German settlers in the United States on the Mexican border, in central Mexico, and in Brazil; and domestic missions in Florida, the Rocky mountain region, Montana, northwest Texas, Oregon, and California. The missions of the former class return 48 missionaries, 17 missionaries of the Woman's Board of Missions,79 native preachers, 185 other native helpers, and 11,748 members; the domestic missions return 124 missionaries, 95 local preachers, and 52,593 members. In all the missions are returned 231 Sunday schools, with 10,386 pupils; 126 churches, valued at $199,223; 16 boys' schools, with 1,373 pupils; 16 girls' schools, with 869 pupils; a total of mission property valued at $457,965; 23 self-supporting churches; and collections of $18,946. The Board of Missions, at its annual meeting, following the action of the General Conference, recommended the erection of the Central Mexican Mission and the Mexican Border Mission into annual conferences.

Methodists in Great Britain.—The following table exhibits the number of members in the several Methodist churches of Great Britain as returned in the statistical reports for 1885:

Wesleyans	413,263
Primitive Methodists	192,389
United Methodist Free Churches	76,385
Methodist New Connection	29.327
Bible Christians	26,359
Wesleyans of Ireland	24.971
Total	762,594

The aggregate increase for the year was 5,041.

Wesleyan Methodist Connection (in Great Britain).—The following is the "General View" of the statistics of the British and affiliated conferences, as published with the "minutes" of the Conference of 1885.

CONFERENCES.	Members.	On trial.	Ministers.	On trial.	Supernumeraries.
I. In Great Britain	413,168	30,861	1,589	70	288
II. In Ireland and Irish Missions	24,971	862	173	19	44
III. In Foreign Missions	29,133	4,213	203	106	7
IV. French Conference	1,703	94	28*	2	4
V. S. African Conference	22,816	8,836	102	55	12
VI. W. Indian Conference	43,317	1,807	67	18	..
Total	535,103	46,673	2,162	270	355

* The French ministers who are employed in the Channel Islands district are not included in these returns.

The annual meeting of the Wesleyan Missionary Society was held in London, in May. Mr. H. H. Fowler, M. P., presided. The total income of the society for the year had been £146,308, and the expenditures £146,289. The summary of the condition of the missions as presented in the report of the committee in Europe, India, China, West Africa, the Transvaal, British Honduras, and the Bahamas, is as follows: Number of central or principal stations, 285; of chapels and other preaching-places, 1,210; of missionaries and assistant missionaries, 287; of other paid agents (catechists, interpreters, day-school teachers, etc.), 1,543; of unpaid agents (local preachers and Sunday-school teachers), 3,279; of church-members, 29,091; of persons on trial for church-membership, 4,203; of pupils, 54,678.

The Wesleyan Conference met in its one hundred and forty-second session at Newcastle, July 21. The Rev. Richard Roberts was chosen president. Among the topics of connectional polity that were considered was a scheme for the establishment of a mission, to be called "the London Wesleyan Methodist Mission," for the purpose of carrying the gospel "to such regions of London, and especially of central London, as are most spiritually destitute and degraded," toward which it was decided to institute a fund of £50,000. The several district committees were advised to arrange for the promotion of evangelization in other parts of the kingdom, for the collection of information as to the present condition of Wesleyan Methodism in the villages, and suggestions as to the means to be employed for improving it, and to inquire what provision was being made by other Methodist bodies. A proposition for a modification of the manner of appointing chairmen of districts, in which was included the feature of designating in certain cases as chairmen, for a term of years, special ministers, who shall be separated from circuit work, was continued in the hands of a committee for another year's consideration. The case was presented of a woman whose name had been for several years enrolled in the list of local preachers in one of the districts; the Conference declined to make inquiry into it; but afterward explained its action in a resolution affirming that its course in the particular case was due to special circumstances, and did not imply any departure from existing rules and usages. A petition was adopted for presentation to the House of Commons, deploring the existing law for the protection of young girls, "which now practically ceases at the age of thirteen years," and asking that the age of consent be fixed at eighteen years; that the right to enter suspected places, provided for in the bill then before the House, be enacted, and that the clauses relating to procuration shall not contain any provisions exempting any persons from their operation. Sanction was given to a proposition for distributing, through the Sunday schools, cards warning parents and young girls against the wiles of evil and designing persons. A petition was adopted inviting the attention of the Parliament to the bill then before it, to promote the better housing of the working-classes in England, as a measure contemplating an object having a more direct bearing upon the moral and social well-being of the population of the country than almost any other which might claim attention. A minute was passed, declaring the use of the trust property of the Connection for political meetings not contemplated by the provisions of any of the trust deeds to be unlawful; and expressing the conviction that any such use of the premises would be detrimental to the best interests of the societies.

III. Primitive Methodist Church.—The following is a summary of the statistics of this Church as they were reported to the Conference in June: Number of traveling preachers, 1,042; of local preachers, 15,785; of leaders, 10,653; of members, 192,389. The number of Sunday schools in the home districts was returned as 3,748, with 57,991 teachers and 380,815 scholars. In connection with the home missions there were returned 162 chapels, with 17,074 lettable sittings and 11,082 free sittings.

The annual meeting of the Primitive Methodist Missionary Society was held May 19. The gross income for the year for home and colonial work had been £18,700. In the United Kingdom the society had employed 67 missionaries at 53 stations, in connection with which 6,395 members were enrolled. The colonial districts returned an increase of 700 members. Favorable reports were made of the missions in Fernando Po and in South Africa.

The sixty-sixth annual conference of the Primitive Methodist Connection met at Reading, June 10. The Rev. R. Fenwick was chosen president. The Missionary Committee reported the receipt during the year of £18,700 to the general fund and £1,903 to the African fund, besides the amount that had been contributed toward the extinction of the debt—a measure which had been carried to success. Report was made of interference with the missions in West Africa by the Spanish authorities, and measures were taken to make representations to the Government on the subject. A committee which was appointed to consider the subject of extending the missions of the Connection reported, recommending the opening of new missions to the heathen, mentioning Opobo and the Congo as suitable places, and advising inquiry respecting the establishment of a new station in South Africa. Reports were made of the condition of the book-room; the superannuated preachers', widows', and orphans' fund; the chapel fund; the Connectional Insurance Company; and the Metropolitan Chapel fund. On the subject of letting chapels and school-rooms for political meetings, the Conference decided that, under certain restrictions, school-rooms, but not chapels, could be used for such purposes. A resolution of sympathy with Mr. Gladstone was passed, in which his action in preventing war with Russia was especially referred to. A petition to Parliament in favor of the Sunday Closing Bill was adopted.

IV. United Methodist Free Churches.—The following is a summary of the statistics of this body as they were reported to the Annual Assembly in July: Number of circuits, 221 home and 63 foreign; of itinerant ministers, 382; of supernumeraries, 37; of leaders, 3,312; of preachers, 4,078; of members, 71,385; of members on trial, 8,268; of chapels, 1,353; of preaching-rooms, 195; of Sunday schools, 1,353, with 26,934 teachers and 196,706 pupils.

The annual meeting in behalf of the home and foreign missions of the United Methodist Free Churches was held April 27. The receipts of the Missionary Committee had been £18,803, and the expenditures £18,793. Reports were made of the progress of the missions in East Africa (Zanzibar coast), where land had been secured for the extension of the mission into the Galla country, Sierra Leone, China, Jamaica, and Australia and New Zealand.

The twenty-ninth annual assembly of the United Methodist Free Churches met at Nottingham, July 14. The Rev. Alfred Jones was chosen president. The Committee of the Commemorative fund, which had been instituted as a memorial of the twenty-fifth anniversary of the union of the Wesleyan Methodist Association and the Wesleyan Reformers into the present organization, reported that a total sum of £32,293 had been contributed to its purposes. The Committee of the Chapel Relief fund reported that it had assisted in the building or enlargement of 98 chapels, 15 schools, and 3 ministers' homes, at a cost of £46,767. The book-room returned sales to the amount of £5,438. The Children's fund returned an income of £2,620. The Conference, by resolution, affirmed that co-operation was desirable with the different Methodist bodies in relation to evangelistic enterprises and the extension and consolidation of Methodist spiritual life.

V. Methodist New Connection.—The Conference of the Methodist New Connection met in Manchester, June 15. The Rev. A. McCurdy was chosen president. The numerical returns showed a decrease of 60 members, but an increase of 211 in the number of probationers. The Chapel Fund Committee reported the expenditure during the year of more than £26,000; the home missions returned an increase of 82 members. The Paternal (or Children's) fund returned a large capital, with a slight increase of balance in hand, while 310 children had claims upon it. The Missionary Committee returned an income of £6,782, and an expenditure, in England, Ireland, Australia, and China, direct from the fund, of £6,652; besides which moneys had been raised and spent locally on all the mission-stations. The Conference resolved to make an effort to extinguish the debt of £2,957 standing against the Missionary Society.

VI. Wesleyan Church in South Africa.—The Conference of the Wesleyan Methodist Church in South Africa met in its third annual session at Durban, Natal, April 14. The Rev. R. Ridgill was appointed president. From the statistical report it appeared that there were now within the Conference 336 chapels, 901 preaching-places, 106 European and 80 native ministers, 35 interpreters, etc.; 1,336 local preachers, 1,932 class-leaders, and 3,942 English and 18,874 native members, or 22,816 members in all, with 8,836 on trial. The increase in the number of members was 823, of which the increase of English members was the largest ever recorded in the country. The year had been a very trying one for work among the natives, and more than a thousand members of that class had been lost by migration. The educational report showed that there were now 13 English and 250 native day schools, with 408 teachers and 14,862 pupils, of whom all but 704 Europeans are natives, and an average attendance of 10,679. The number of Sunday schools was 93 English and 180 native, having 18,180 pupils, of whom 7,419 were European and 10,761 native. The Conference had a supernumerary ministers' fund of £800, a contingent fund of £128, and a children's fund of £3,207. The subjects were considered of establishing a South African Wesleyan Missionary Society, and a mission press and connectional book-room. Both schemes were referred to committees for consideration during the year. The Church is represented by the newspaper, "The South African Methodist."

VII. West Indian Wesleyan Conference. — The first meeting of the West Indian General Conference of the Wesleyan Church was held in Bridgetown, Barbadoes, beginning March 19. The attention of the Conference was given to the scheme for establishing the Coke Memorial College in Antigua, and to the adoption of plans for observing the centenary of West Indian Methodism in 1886. A memorial volume is to be published on the occasion, to contain biographical sketches of the men who helped build up the church. The General Conference, which is to meet once in three years, is composed of two annual conferences, the Eastern and the Western, each of which has its newspaper organ.

VIII. The Wesleyan Church in Tonga.—A secession has taken place in the Australasian Wesleyan Methodist Church, through the withdrawal of the great mass of the church in Tonga, or the Friendly Islands, from the Annual Conference to which they were attached, and the erection of an independent church. The trouble began in 1881, when a popular missionary was recalled by the Conference authorities, and a district chairman was removed from his position. The revolt was led by the King, and has resulted in the secession of about seven eighths of the members to the new church. No change is intended, either in creed or polity, but the churches will simply form an independent Conference. It is said, however, on the authority of the "Fiji Times," that persecution has been instituted to force the people to accept the new ecclesiastical organization.

MEXICO, a confederated republic of North America; area, 748,144 square miles; population in 1883, 10,025,649. (For details, see the "Annual Cyclopædia" for 1882 and 1884.)

Government.—The President is Don Porfirio Diaz, elected for four years, beginning Dec. 1, 1884. His Cabinet is composed of the following ministers: Foreign Relations, Señor Ignacio Mariscal; War, Gen. Pedro Hinojosa; Public Works, Gen. Pacheco; Justice, Señor Joaquin Baranda; Finance, Señor Manuel Dublan; Interior, Señor Manuel Romero Rubio. The Minister to the United States is Señor M. Romero; the United States Minister to Mexico is Gen. Jackson; the Mexican Consul-General in New York is Señor J. N. Navarro.

Sanitary.—In November President Diaz, accompanied by the Ministers of the Treasury, Public Works, and Interior, made a visit of inspection along the route of the proposed sewer for draining the valley of Mexico. The plans involve the construction of a canal from Lake Tezcuco to Lake Zumpango; then the water is to pass through a tunnel five and a half miles long. The estimated expense of the work is $4,000,000.

Finances.—In June, 1885, the entire national debt of Mexico, so far as recognized, was $125,000,000, involving an annual interest charge of $4,500,000. The financial embarrassment of the Government had been growing steadily worse; hence the President and his Cabinet resolved on applying a remedy which, though severe, it was hoped would give the Government a chance to recover from its pecuniary distress. By official decree of the President it was announced, on June 22, that from the date of the law all taxes in force should be paid in cash or notes of the National Bank of Mexico, and that custom-house certificates were no longer receivable. The second article of the decree provided that, for the purpose of withdrawing from circulation notes and bills constituting the floating debt, and to cover pending obligations, the Federal Treasury should issue treasury bonds of the value of $25,000,000 at 6 per cent., payable in twenty-five years. Provision was made for the issue of suitable bonds with fifty-two semi-annual coupons, these bonds to be made payable to bearer, the National Bank of Mexico to undertake payment of the interest on the new bonds and their redemption, the commission to be paid the bank to be arranged hereafter. The decree contained the following passage:

> It has been seen by the President that the probable income of the ensuing fiscal year would not meet the expenses fixed by the recent budget, and in order equitably to apportion the necessary retrenchment, salaries of over $500 per annum are to be subjected to discounts: On salaries of from $500 to $1,000, 10 per cent.: on salaries of from $1,000 to $2,000, 15 per cent.; on salaries of from $2,000 to $6,000, 20 per cent.; on salaries of from $6,000 to $15,000, 25 per cent.; on salaries over $15,000, 50 per cent. Each official whose salary is reduced receives from the treasury a a certificate of indebtedness covering the percentage taken off.

The law divided the debt into two classes, those contracted prior to July, 1882, and those subsequent to that date. The latter, principally obligations on the score of subventions and loans from the National Bank, were to be funded in the above-mentioned $25,000,000 6 per cent. bond issue; this was, therefore, the part of the measure affecting American capital in the shape of railroad subsidies. The first class of debts is to be consolidated into an issue of bonds to bear an interest of 3 per cent., beginning Jan. 1, 1890. In 1886 the rate is to be 1 per cent.; in 1887, 1½ per cent.; in 1888, 2; and in 1889, 2½. The English debt is admitted on the basis of the arrangement of 1851; that is, $51,000,000, together with some additions of indeterminate amount, which will probably bring the total up to about $65,000,000.

At the time the President issued his decree, the budget estimate for 1885–'86 amounted to $38,898,363.

The Mint.—The coinage in 1884 was $25,377,378 silver, $328,698 gold, and $2,744,000 nickel—together, $28,450,076. In June the Government sold the $4,000,000 worth of nickel coin that has been stored at the palace since the "nickel riot." The amount paid was $800,000, and the nickel forthwith shipped to England.

Depression in Trade.—Business has been so dull in the city of Mexico, that during the first six months of the year 1,721 clerks were discharged on account of lack of employment.

The Tariff.—The new tariff went into operation on July 1, and there was a good deal of complaint in consequence of the ambiguous wording of many of its regulations involving heavy penalties for the slightest misinterpretation. In one item there was, however, a decided reform and departure from an antiquated method of levying the duties on dry goods, which had at all times been the terror of the Mexican importer; the counting of the threads within a given surface of cotton goods and classification thereof was abandoned, and crude and white cotton goods simply taxed 10 cents the square metre, and colored 15 cents.

Commerce.—The import of merchandise into Mexico, on which the estimate of the probable income to be derived from the new tariff was based, was that of the previous year, and it proves to have been:

From England	$13,614,000
From the United States	9,430,000
From France	4,247,000
From Germany	2,654,000
From Spain	1,030,000
From other countries	250,000
Total	$31,225,000

Of this amount, $24,230,000 paid duty, and $6,995,000 entered duty free. The American trade (merchandise) with Mexico has been as follows:

FISCAL YEAR.	Imports into the United States.	Domestic exports from the United States.
1883	$8,177,123	$14,370,992
1884	9,016,486	11,089,603
1885	9,267,021	7,370,599

Education.—On Nov. 9 a bill was introduced into the Mexican Congress providing for compulsory education throughout the republic; also a bill permitting the free exercise of the legal, medical, and educational professions.

During the summer Señor M. R. Mendez, Lieutenant-Governor of the State of Puebla, traveled in the United States, investigating the public schools, their management, curriculum, and sources of revenue.

The Church.—Accounts received from Mexico during the year all agreed that there is something of a Catholic reaction in progress. The civil Legislature of recent years has been strongly anti-clerical. The church property, estimated to be in value one half of the entire real estate of the country, was nationalized, the monastic orders were abolished, and the Jesuits banished; full religious liberty was proclaimed, religious instruction was forbidden in the public schools, religious rites were restricted to the interior of church edifices, and ecclesiastics were forbidden the wearing of any distinctive dress in the streets. These enactments were not merely statutes, but were incorporated into the Constitution. For a long time the ecclesiastical party was completely crushed, but of late it has shown a disposition to defy the Government; religious processions march through the streets, and the sacerdotal garb is seen in public.

On March 27 the Secretary of the Interior issued a circular declaring that the reform laws must be strictly observed during the coming holy week, and that no religious processions outside of churches should be allowed. Despite this proclamation, several priests in villages surrounding the capital conducted such processions, for which they were, on April 9, fined and imprisoned.

Thirteen years ago a Mr. Watkins went to the city of Guadalajara as a Protestant missionary, and found nobody to welcome him. At the end of a year he had sixteen converts. Now there are 1,000 members of Protestant churches in the neighborhood.

Lotteries.—Lotteries are sanctioned both by the Church and the Government. There is a lottery-office on nearly every block in the capital, and at every corner men, women, and children peddle tickets. Many charitable institutions are sustained by this sort of gambling. The principal institution of the kind in the city of Mexico is the "Lottery of Divine Providence," and the dead walls were lately covered with placards announcing that the anniversary of the appearance of the Holy Virgin to the shepherd at Guadalupe would be celebrated by great religious ceremonies, with cock-fights, bull-fights, games of chance.

Opposition to Mormons.—Toward the close of September the Catholic population of the State of Chihuahua began to take strong ground against Mormon immigration, and an agitation was set on foot to expel those of the Latter-Day Saints who had already settled, and to exclude hereafter any that may attempt to secure homes anywhere in the republic. Since Congress, at its last session, granted John Taylor, the head of the Mormon Church, large tracts of public lands in Sonora, Chihuahua, and other northern border States, for purposes of colonization, a systematically organized movement has been started to have the grant annulled.

Hostile Indians.—In 1885 hardly a month passed by without an encounter with these Indians, who are not inferior to the Mexicans in prowess. In one of these encounters the latter were worsted; it was with the Yaquis, a semi-independent tribe of Sonora. These hold the title to their lands from the King of Spain, and do not recognize the Republic of Mexico. No taxes or imposts are levied on them. They are a hardy, agricultural race, living on small patches of fertile soil on the borders of Yaqui river. Cajeme, their chief, is a man of fair education for Mexico, and a stern ruler. They number over 15,000, of whom at least 5,000 are adult males. Their principal arms are bows, arrows, spears, and a three-cornered bludgeon made of iron-wood. The trade of the Yaqui Indians with the port of Guaymas averages over $2,000 monthly.

What the motive of the Mexican Government was for attacking these Indians it is difficult to say; probably it had a bearing on our own frontier interest, but the result was a crushing defeat in an encounter during the latter part of June, in which Gen. Garcia and 400 Mexican soldiers were killed. Simultaneously the Government was preparing for a campaign against the Apaches of the Sierra Madre. Operations against them continued with varying success during the latter half of the year.

On Nov. 10 the agreement providing for the crossing of the international boundary-line by the troops of the United States and of Mexico, in pursuit of hostile Indians, was extended until Nov. 1, 1886.

Natural Phenomena.—Mexico suffered severely in 1885 from inundations, water-spouts, and drought, alternately, and (the usual acompaniment of the latter) grasshoppers. A nauseating stench infested Mexico, Puebla, and Vera Cruz in March, and this gave rise to the opinion that it did not proceed from the lakes and dead fish, but was of volcanic origin, reaching Vera Cruz from the Orizaba, Puebla from the Malinche, and Mexico from the Popocatapetl and Ixtathihuatl volcanoes. It was supposed that some violent combustion of gases occurred in these mountains, which escaped through the craters and spread over the land, and earthquakes were predicted for Mexico. The phenomenon had been preceded, on Feb. 8, at Tequisixtlan, in Oajaca, by a sharp earthquake lasting several seconds, and a more violent shock was felt at Niltepec, in the same State, buildings swaying and one house falling.

Politics.—In March and April interest was concentrated on the invasion of Salvador by Gen. Barrios, President of Guatemala, and the active share in the quarrel which Mexico was about to take by sending an army to the frontier, and at the same time reviving certain claims against the neighboring State. Fortunately for Mexican tax-payers, Gen. Barrios fell at the very outset of the campaign, and Guatemala withdrew from the attempt to force a union on her sister republics in Central America, and, so far as Mexico was concerned, the matter ended. In May the election of State Governors kept the country excited, and a rupture occurred between the President and his predecessor in office, Gen. Gonzalez. Early in July the students in the city of Mexico made an attempt at revolution against the Government, using as a plea the President's debt-consolidation decree of the previous month, which recognized the English debt. But the Government promptly quelled the disturbance, and arrested the youths and the editors of newspapers that indulged in too severe criticism of the measures resorted to. In October pardon was granted to all except seven of them, the editors, Señores Chivari and Carrillo, condemned to four, and five to three months' imprisonment.

On Oct. 19 the Liberal deputies got a vote through the lower house requesting the Government to render an account of the recent sales of national lands. The Minister of Public Works appeared and presented a written statement of the contracts made, and immediately the President of the House of Deputies declared the house adjourned. The Opposition deputies protested. On Oct. 20 the police had to clear the galleries of the excited supporters of the Opposition. Deputies Viñas, Duret, Mizon, and others were in the galleries. The crowd made such a noise that they interrupted the proceedings of the House, and the leading Opposition Congressmen declared that they would consent to have the demonstrations of applause stopped. Still, they demanded a verbal explanation of the land-sales. On Oct. 30 there was another tumultuous scene in Congress. The Liberal Opposition deputies presented a signed proposition, in which articles of impeachment of ex-President Gonzalez, for misuse of public funds, were drawn up. Deputy Duret handed the paper to the President of the Chamber, and supported the proposition with a speech. He was interrupted by the members of the Chamber, while the spectators in the galleries wildly applauded. Señor Duret said he wanted the case sent to the national grand jury. The House was finally declared adjourned. In November the resolution accusing ex-President Gonzalez was sent by Congress to the grand jury section of that body.

The struggle between the Administration party and the Opposition in reality hinged on the question of the advisability of Congress giving special power to the Executive. The Government was asked authority for the President to reorganize the army, but the Opposition contends that Congress should do the work itself. On Nov. 4 the Opposition went a step further, and endeavored to get through a resolution abrogating the financial decrees of June, one of which recognized the English debt, while the other suspended all subsidies. The resolution was put to a test, and defeated by an overwhelming vote.

Railroads.—By the beginning of the year the railroad service between the northern cities of the United States and the city of Mexico had been so perfected that four heavy locomotives shipped from Philadelphia on Dec. 15, 1884, reached the city on Jan. 1, 1885. On Jan. 18 the Mexican Central Railroad Company was making arrangements to establish a custom-house commission agency at Paso del Norte, to enable the merchants, at a moderate outlay, to pass their goods promptly through the Mexican custom-house.

The extent of the diversion from the ocean to the railroads of American exports to Mexico is becoming apparent on examining the customs revenue reported from El Paso. The amount realized in April was $98,145, as against $34,482 in the same month of 1884.

The Tehuantepec Ship-Railroad.—In December Judge Alexander Cochrane returned to New York from Mexico, which city he had visited in behalf of the Tehuantepec Ship-Railroad. He had obtained from President Diaz several valuable extensions and concessions to the original charter of that company. The Mexican Government gives 2,500,000 acres of land, and guarantees one third of the net revenues of the railway for fifteen years after completion, which will amount to $1,250,000 per annum, and also allows the company to secure from the United States or any other nation a guarantee of the other two thirds, and also the right to make rebates to the merchant marine of any other nation joining in the guarantee.

Steamships.—In March the Government granted a concession to the Mexican South Atlantic Colonization and Mail Steamship Company to establish a line of steamers between Vera Cruz and Buenos Ayres, touching at St. Thomas, Rio de Janeiro, and points in Uruguay and Paraguay. The steamers will make monthly round trips, and the company will receive a subsidy for each trip of $8,000 for the first ten years, $16,000 for the second ten years, and $14,000 for the third ten years, carrying the mails free, and Government employés half free. The company will be allowed to bring three hundred colonists monthly, and will be compelled to bring at least five hundred yearly.

Post-Office.—The Government recently published its postal code, according to which letters weighing 15 grammes or less pay 10 cents for any distance within the republic except in cities, where the postage is 4 cents, postal-cards paying half the rate. The postage to countries belonging to the Postal Union is respectively 6 and 3 cents to the island of Cuba and United States, and 12 and 5 cents to all the other countries.

Mining.—In June the discovery of gold-diggings was reported from the Santa Rosa mountains in Chihuahua, and a good many adventurers left for that locality from Eagle Pass, New Mexico.

In August, Mormon colonists recently settled at Corralitas reported the discovery of rich silver-ore there. In September a similar report reached Paso del Norte from the Sabral mountains, in the Sierra Madre, 110 miles from there, and 60 miles from the nearest station on the Mexican Central Railway line.

In March, Prof. Norton, of the Massachusetts Institute of Technology, analyzed the surface specimens of coal recently discovered on the line of the Mexican Central Railroad. He reported it to be of a rather poor quality, but available for fuel. He found its heating power to be between one third and one half that of Pennsylvania anthracite. The lack of fuel is one of the most serious hindrances to Mexican progress. The mountains have been denuded of timber, and brushwood gathered by persons at a shilling a day commands $30 a cord, while a better grade of wood runs up to $80 a cord.

Cotton-Weaving.—An important move was resolved upon by the Quequechan mill corporation of Fall River early in the year, which included the transfer of the entire plant to Mexico, the object being to erect a mill there, equip it with the machinery in the Fall River mill, add a few printing-machines, and enter upon the complete manufacture of certain classes of printed goods of that country. In Mexico it will employ Mexican help.

MICHIGAN. State Government.—The following were the State officers during the year: Governor, Russell A. Alger, Republican; Lieutenant-Governor, A. Buttars; Secretary of State, H. A. Conant; Treasurer, E. H. Butler; Auditor, W. C. Stevens; Attorney-General, M. Taggart; Land Commissioner, M. S. Newell; Superintendent of Public Instruction, H. R. Gass; Railroad Commissioner, William McPherson, Jr.; Insurance Commissioner, H. S. Raymond. Judiciary, Supreme Court: Chief-Justice, Thomas M. Cooley; Associate Justices, James V. Campbell, Thomas R. Sherwood, and John W. Champlin. Judge Cooley's term expired during the year. He was succeeded on the bench by Allen B. Morse.

Legislative Session.—The Legislature met on Jan. 7, and adjourned on June 20. The following were among the acts passed:

Art, cultivation of, act to provide for.
Alger, county of, organized.
Agricultural College, providing for the publication of experiments, etc.
Actions, survival of, act amended.
Administration of estates, with will annexed, act amended.
Alienation, by deed, act amended.
Boundary-line between Houghton and Baraga counties changed.
Board of Fish Commissioners, act to establish.
Blooded stock, incorporation of companies for breeding authorized.
Bonds, act to facilitate the giving of.

Chancery, sales of lands in pursuance of decrees.

Contracts for sale of real estate, incompetent persons.

Co-operative and mutual benefit insurance companies, to bring suits against.

County of Iron organized.

Corporations, election of directors by minority stockholders.

Distribution of estates, act amended.

Debtors, distribution of property among creditors, act amended.

Debts and legacies of deceased persons, act amended.

Day's work, ten hours, act to provide for.

English sparrow, act to authorize the killing thereof.

Execution, property exempt from levy.

Estates, partition and distribution of, act amended.

Employment of children and women, act to regulate.

Estates, act to provide wives with property and maintenance from.

Insurance companies, act for incorporation, to insure against cyclones.

Lands, protection of, cutting timber, act amended.

Lead-ore, specific tax on, suspended.

Logs, lumber, timber, protection of, act amended.

Live-stock, Sanitary Commissioners, State Veterinarian, appointment of.

Pardons, Advisory Board.

Purchasers and settlers on swamp lands, act for relief of, to repeal acts.

Sanitary Commission, etc., provided for.

The Governor vetoed a bill abolishing the contract-labor system in prisons.

A bill to re-establish the death-penalty passed the House, but failed in the Senate.

A prohibitory constitutional amendment passed the House, but failed in the Senate.

Financial.—The appropriations made by the Legislature, payable in 1885, aggregate $854,925.77; for 1886, $395,267, making a total of $1,250,192.77; to which add appropriations made by previous Legislatures and payable in 1885, $160,163.50; and in 1886, $157,663.50; for the two years $317,827; or a total for 1885 of $1,015,089.27; for 1886, $552,630.50; making a grand total for the two years of $1,568,019.77. The amount of tax to be levied for 1885 is $1,665,361.40; for 1886, $1,195,389.17; or a grand total for the two years of $2,850,750.57.

The entire taxation for State purposes for 1885 was a trifle over two mills on the dollar of the equalized valuation; in 1883 it was one mill and eight tenths.

Railroads.—The report of the Commissioner presents in detail the condition of sixty corporations reporting for the year ending Dec. 31, 1884, under the control of thirty-four managements. The total miles of main track within the limits of the State at the close of the year were 5,120·94, an increase from 1883 of 155·06 miles. The Commissioner estimates the additional main tracks to be constructed during 1885 at 98·85 miles. The capital stock of the corporations is reported at $278,792,854.31, an increase upon the preceding year of $18,139,699.29. It is $21,706 per mile of road. Only about 5·85 per cent. of the whole is held by Michigan stockholders. The total indebtedness of the corporations at the close of the year was $345,787,796.36, or $30,231.50 per mile.

The total traffic earnings during 1884 were $81,807,316.08. From passengers $26,043,964.73, from freight $55,763,351.35, a decrease from the previous year of 9·43 per cent. The total tax paid by Michigan railroads into the State treasury for the year 1884 was $634,817.28.

Insurance.—In the year ending Dec. 31, 1884, the whole number of insurance companies doing business in the State was 177, of which number 124 were joint-stock companies as follows: Three home companies, 96 companies of other States, and 25 foreign companies having branches in the United States. There are also one mutual fire-insurance company of another State, and 52 mutual fire-insurance companies of the State. The net decrease in the number of companies was ten, and the net decrease of capital represented was $2,962,080.

State Prison.—The net earnings for the year ending Nov. 30, 1885, were $87,402.33. The total expenses were $99,613, the expense excess over the earnings being $12,210.66, against $18,501.99 in 1884. The number of inmates is larger than for three years past, being 734, against 670 last year.

Liquor-Traffic.—The number of dealers and collections reported in 1884 was: Dealers, 4,167; tax collected, $1,055,473. The total collections for ten years aggregate $6,057,838. While the figures show an increase of 263 saloons in the State during the last year reported, an analysis proves that the greater part of the gain came from lumbering and mining counties, or counties in which are large cities.

Political.—The Republican State Convention met in Lansing on March 11, and nominated for Regents of the University Charles S. Draper and A. Y. McAlvay, and for re-election as Justice of the Supreme Court, Thomas M. Cooley.

The Fusion (Democratic and Greenback) candidates were: Supreme Court Justice, Allen B. Morse; Regents, C. R. Whitman and Moses W. Field. The Prohibitionists nominated L. S. Ellis and F. B. Cressey for Regents, but seem to have supported Morse for Justice. The election occurred on the 6th of April, and resulted in the success of the Fusion ticket. The following was the vote: For Supreme Justice, Cooley, Republican, 138,694; Morse, Fusion, 168,625. Morse's majority is 29,931. For Regents, Draper, Republican, 138,353; McAlvay, Republican, 137,515; Whitman, Fusion, 155,743; Field, Fusion, 153,626; Ellis, Prohibition, 14,708; Cressey, Prohibition, 14,588. Whitman's majority over Draper is 17,390; and Field's majority is 16,111 over McAlvay.

Judicial Decisions.—The State Supreme Court, in a case arising under the Detroit election law, decided that law to be unconstitutional. The act in question required that the Board of Commissioners to be appointed for the city of Detroit should be appointed equally from the two leading political parties, and that any vacancy should be filled by the appointment of a man from the same political party as the one whose place he was to fill. The Court held:

> It is an important principle under our constitutional system that no one shall be affected in any of his legal or political rights by reason of his opinion on political

subjects or other matters of individual conscience. Any attempt to inquire into the sentiments of the voter is not only an abuse, but one which it is the chief purpose of the ballot system to prevent. Any law making party affiliations or political or religious opinions a test of qualification for holding an office created is unconstitutional.

The Supreme Court of the United States has decided a law of Michigan taxing traveling salesmen from other States to be unconstitutional.

Population of Cities.—The following are the chief cities of the State, with their population in 1880 and 1884:

CITIES.	1880.	1884.
Alpena	6,153	9,210
Bay City	20,693	29,415
West Bay City	6,397	9,492
Niles	4,197	4.606
Coldwater	4,631	5,102
Battle Creek	7,063	10.021
Marshall	3,795	4,031
Escanaba	3,026	4.339
Flint	8,409	9,035
Lansing	8,319	9.779
Ionia	4.190	4,693
Jackson	16,105	19,136
Kalamazoo*	......	13,938
Grand Rapids	32,016	41,934
Adrian	7,849	9,350
Manistee	6,930	10,373
Ishpeming	6,039	6,843
Marquette	4.690	5,612
Negaunee	3,931	4,103
Ludington	4.190	5,433
Big Rapids	3.552	5,917
Menominee	3,288	5,578
Monroe	4,930	5,216
Muskegon	11,262	17,845
Pontiac	4.509	5,348
Grand Haven	4,862	5,914
East Saginaw	19,016	29,100
Saginaw	10,525	13,767
Port Huron	8,833	10,390
Ann Arbor	8,061	7,922
Ypsilanti	4,984	5.302
Detroit	116,340	133,269

* Incorporated after 1880.

The total population of the State in 1884 was 1,856,100.

MINERAL WATERS. Mineral waters, in the medical acceptation of the term, are waters that are charged, during their filtration through the earth, with certain fixed or volatile substances which make them available in the prevention or cure of disease. They are thus distinguishable as medicinal waters from those which contain inert or harmful constituents.

Origin.—Mineral waters generally flow from the deeper superficial strata of the earth's crust. It was formerly held that their elements were combined in the earth under the influence of electricity, as in Lavoisier's experiment; but it is now admitted that their source is the rainfall of the region, which penetrates the crust of the earth to a considerable distance, and fills subterranean reservoirs of water, often under great pressure. These reservoirs become charged with the soluble elements of the strata around them, and are forced to the surface, whether by the pressure of gases upon them or by hydraulic pressure, as in the case of the jet from an artesian well. At Carlsbad the subterranean reservoirs are so near the surface that borings have been made into them, the sound penetrating to an immense depth through three layers or roofs of accretions. After these were bored through, a large reservoir of boiling water was found, the bottom of which could not be sounded. Water and gas rushed through the opening with great violence. In many cases rain or dryness influences the abundance, the temperature, or the strength of mineral springs. Many of the most important mineral springs, and especially the warm springs, are found at points where there is evidence of volcanic disturbance; but the warmest springs, at least in Europe, are those which have maintained the most remarkable uniformity of their heat and of their mineral constituents during the present century, a time during which they have been measured, thermometrically and chemically, with increasing accuracy.

The permanence of hot springs is remarkable. In Greece, says A. von Humboldt, the springs of Castalia, Pirenæ, Cassotis, and Erasinos still flow at the same places as during the classic age. Cases of considerable variability have, however, been known; and, after the great earthquake of Lisbon (1755), most of the warm springs of Europe became warmer and flowed more abundantly for a time; for an hour and a half the water of Töplitz, in Bohemia, turned reddish yellow, and the springs of Clifton, England, were turbid.

Temperature.—Mineral waters that are warmer than the average temperature of the air whence they emerge are classified as warm or thermal springs; but the term is generally restricted to those which have a temperature above 80° Fahr. This greater heat may be derived from two distinct sources; namely, from adjacent volcanic action, or from the central heat of the earth. The latter agency is often the more powerful. The *aguas calientes* of Venezuela, which spring far from all volcanoes in regular beds of granite, have a temperature of 207° Fahr., while the springs near the active volcanoes of Pasto, Cotopaxi, and Tunguragua range from 97° to 130° only. The Calistoga hot spring, in California, ranges in temperature from 150° to 195° Fahr.; the Santa Barbara springs are 112°. The California geysers throw out vast quantities of water that is nearly at the boiling-point. The thermal mineral springs are, as a rule, more effective medicinally than the cold.

Constituents.—The main bases that are found in mineral waters are magnesia, soda, potassa, lime, and alumina; the main acids and gases are carbonic, sulphuric, and silicic acid, chlorine and iodine. The salts are all derived by solution from the strata through which the water is forced or percolates. The sulphates and chlorides, as Dr. Walton remarks, are readily dissolved by pure water, and when water is highly impregnated with carbonic acid and with oxygen, its solvent power is greatly increased. No rocks, indeed, can altogether resist its action under pressure; even quartz, granite, and basalt are partly decomposed by carbonated water. M. Struve shows that it decomposes silicates under a moderate pressure by driving out silicic acid. Iron and lime, insoluble as carbonates, are soluble as bicarbonates, and highly carbonated water will dissolve them. M. Struve took a quantity of clinkstone from the neighborhood of the alkaline spring at Bilin, Bohemia, and subjected it pulverized to the action of carbonated water under the moderate pressure of two atmospheres. The result was the almost identical reproduction of the Bilin spring-water.

The combinations of elements, however, as shown in analyses, are to a certain extent empirical; as the chemist, after determining the bases and acids present, combines them according to theoretical formulas, giving the result in grains of carbonate of magnesia, sulphate of potassa, chloride of sodium, etc.; while certain elements, recorded as loss, organic matter, extractive matter, etc., more or less elude his search. It is probable that no artificial imitations of mineral waters can reproduce them as a whole, or be depended upon to have exactly the same curative agency.

The constituents of mineral waters are extremely varied. The main ones are these:

The carbonate of soda is a fat-destroyer. It gives an alkaline reaction, and in medicinal doses neutralizes the acidity and increases the alkalinity of the blood, as well as augments the watery portion of the urine. The carbonate of potassa has similar effects. Small doses of soda aid the digestion, where it is impaired by acidity of the gastric secretions.

The carbonate of magnesia occurs with the most frequency in waters of the secondary and tertiary geologic formations. Its effects are mildly laxative and antacid.

The carbonate of lime, or chalk, is found in the same formations, and is common in the springs of northern France and southern England. It is also alkaline, neutralizing the acids in the stomach, but is constipating in its medicinal action; it is used in treating chronic diarrhœa and chronic bronchitis, and calculous affections, small doses of it being absorbed by the stomach.

The carbonate of iron occurs in mineral waters only as a bicarbonate or protocarbonate. The tonic effects of iron are especially evident upon the use of chalybeate waters, probably owing to the minute subdivision and intimate combination of the ingredients.

The carbonates of lithia and of strontia occur in small quantities in some mineral waters; the latter is recommended in the treatment of gout and uric-acid gravel, as it unites readily with uric acid.

Chlorides are present in nearly all mineral waters; common salt, or chloride of sodium, being the most frequent and abundant, and one of the most important. In small doses it is absorbed; in moderate doses it is aperient, but not cathartic; it does not remove superfluous fat, but it increases the secretion of bile and of gastric juice, and augments the quantity of excreted urea. The chloride of calcium occurs principally in saline waters, and has been used for scrofula and for general debility. The chloride of magnesium is the chief element in the residual bitter liquor or "bittern" of salt-works, and is the characteristic constituent of the Dead Sea water. It has been used as a cathartic. The chlorides of potassium, iron, rubidium, and cæsium are rare, the last two being chemical curiosities. The chloride of cæsium was discovered by its spectrum lines. Kirchhoff and Bunsen evaporated over 105,000 pounds of the mineral water of Dürckheim, and thus isolated a small quantity of the substance, which has been found since then in the waters of Bourbonne-les-Bains and Baden-Baden, and in the lepidolite of Hebron, Maine.

The sulphates also occur frequently in mineral waters. The sulphate of soda, or Glauber's salt, is one of the most abundant of salts. It is a principal ingredient in the Carlsbad waters, and is dissolved from granite, basalt, feldspar, porphyry, and other primitive rocks. It is purgative in its effect, and stimulates the kidneys. Sulphate of magnesia, or Epsom salt, occurs in limestone, serpentine, clay, and slate. It is a mild watery purgative; in a weak dilution it acts upon the kidneys, stimulating the flow of urine. Of sulphate of lime, or gypsum, only twenty grains are soluble in a pound of water. It is not employed medicinally, but is found in spring-waters, where it forms a crust upon twigs and other substances. Sulphate of iron is an astringent salt, seldom present in mineral waters; it is found, however, in the Oak Orchard Acid Springs of New York, and in the Alum Springs of Virginia; usually with it the sulphate of alumina. Sulphate of potassa is also rare, and of little value.

The iodides, though present in mineral waters in but small quantity, are among their most valuable constituents. "Certain springs were long celebrated for the cure of scrofula, goitre, and analogous affections, their efficacy being unexplained until the discovery of iodine, of its effects in these diseases, and finally of its presence in the waters" (Walton). Iodide of sodium is the form most frequently found in mineral waters, but not often in larger amount than one fifth of a grain to the pint; of the iodide of potassium there is seldom more than a trace. Even in these small quantities these salts are of value in the relief of scrofula, goitre, chronic rheumatism, and tertiary syphilis.

The bromides, the phosphates, and the fluorides are found in small quantities in many springs. The bromide of magnesium is found in strong saline waters; it is alterative in its effects, and is used to quiet nervous irritability. The phosphates of soda, of iron, and of lime are respectively a mild cathartic, a tonic, and an alterative for scrofulous affections. The fluorides, the silicates, and some organic acids occur in small quantities, but are not known to be of medicinal value. Some of the salts formed by nitric acid are occasionally found, as the nitrates of soda and potassa; their action is diuretic in small doses, and purgative in larger. More rarely a small quantity of arsenic occurs. It is considered efficacious in the treatment of skin-diseases, intermittent fever, and chronic rheumatism. Mineral waters sometimes contain traces of antimony, copper, lead, tin, zinc, and even of gold, which is one of the most widely, if sparingly, distributed of all metals.

In the sulphur-waters of the Pyrenees, in France, certain organic substances, named barégine, glairine, and sulfuraria occur, which are supposed by Dr. Durand-Fardel to give those waters a sedative action. "The Red Sulphur Springs of Virginia have long been reputed as sedative to the arterial system. They contain an unusually large proportion of organic matter" (Walton).

The gaseous constituents of mineral waters are of much importance. Foremost among them, especially in the saline and in the alkaline waters, is carbonic-acid gas. When breathed, this is quickly fatal to animal life; even so little of it as 15 per cent. in the respired air produces asphyxiation. But when taken into the stomach in moderate quantities it stimulates the secretions, aids the digestion, and acts beneficially upon the nervous system. The sparkle of certain waters and wines, and their pleasant subacid taste, are due to the contained carbonic-acid gas, and indeed water entirely deprived of it is unpalatable. It is the ingredient that makes soda-water a popular drink during the summer months in this country. The manufactured carbonic Hygeia and other waters form excellent additions to the list of beverages. But an excessive amount of carbonic-acid gas causes sickness, vertigo, and asphyxia. These results, as Liebig says, have followed the drinking of fermenting white wine in large quantities; this has produced enough carbonic-acid gas in the stomach to cause death on its entering the blood.

Sulphureted hydrogen is another irrespirable gas, which is found in large quantity in mineral springs, particularly in the colder sulphur-waters, yet most frequently in regions that have been disturbed by volcanic action. Taken internally, it stimulates the peristaltic action of the intestines, and augments the perspiration; in large amount it causes nervous excitement. Sulphur-water baths are sedative.

Other gases, as oxygen, nitrogen, and carbureted hydrogen, exist in many springs, but have no valuable therapeutic action.

Classification. — These variously constituted mineral waters may be classified in various ways: Either (1) geographically, by the countries in which the different springs are found; (2) geologically, by the character of the strata through which they flow, and which give them their distinctive properties; (3) chemically, according to the leading ingredients of their constitution; or (4) therapeutically, by their effects as observed in treatment. There are, indeed, almost as many different classifications referable to these groupings as there are separate treatises on mineral waters. The most accurate scientific classification is that of M. Durand-Fardel, formulated in 1857, and still unsuperseded. It is as follows:

CLASSIFICATION OF MINERAL WATERS (DURAND-FARDEL).

1. Sulphur waters.	With salts of sodium. With salts of lime.
2. Chloride of sodium waters.	Simple. With bicarbonates. Sulphureted.
3. Bicarbonated waters.	Bicarbonate of soda. Bicarbonate of lime. Mixed bicarbonates.
4. Sulphureted waters.	Sulphate of soda. Sulphate of lime. Sulphate of magnesia. Mixed sulphates.
5. Ferruginous waters.	Bicarbonated. Sulphated. With salts of manganese.

For practical convenience, the following classification, adopted by some recent writers, is the more serviceable:

1. Alkaline waters.	Pure. Acidulous (carbonic acid). Muriated (chloride of sodium).
2. Saline waters.	Pure. Alkaline. Iodo-bromated.
3. Sulphur waters.	Alkaline. Saline (chloride of sodium). Calcic.
4. Chalybeate waters.	Pure. Alkaline. Saline (chloride of sodium). Calcic. Aluminous.
5. Calcic waters.	Limestone (carbonate of lime). Gypsum (sulphate of lime).
6. Indifferent thermal waters.	Pure. Alkaline. Saline (chloride of sodium). Sulphur. Calcic.

1. *Alkaline Waters.* — Bethesda, Bladon Springs, Buffalo Lithia, California Seltzer, Capon Springs, Carlsbad, Ems, Highland Springs, Marienbad, Medical Lake, Mont Dore, Rockbridge Baths, St. Louis Spring, Sheldon Spring, Tarasp, Vichy.

The leading constituents of the alkaline waters are the carbonates of soda, potassa, lithia, lime, and magnesia. They are especially valuable when they are of high temperature, as at Vichy and Carlsbad, in the cure of gout occurring in persons of full habit. They often relieve, if they do not cure, diabetes; and are often successful in the treatment of uric-acid gravel, of chronic bronchitis, of gall-stones, of acid dyspepsia, of obesity, and of catarrh of the bladder. As a rule, they are not to be taken by anæmic or chlorotic patients, as their effects are lowering.

Some of the more noticeable alkaline waters, foreign and American, are as follows:

Bladon Springs, Choctaw county, Ala., are four in number; they are situated in a pine-forest, and are nearly pure alkaline springs, containing from 4·11 to 5·79 grains of carbonate of soda to the pint, and are charged with considerable carbonic-acid gas. They are frequented by Southern people. Access is *via* Mobile and the Tombigbee river, or *via* Demopolis, on the Alabama Central Railroad.

The California Seltzer Springs, in Mendocino county, Cal., contain 10 grains of carbonate of magnesia and 7·6 grains of carbonate of soda to the pint, a good alkaline water.

The Capon Springs and Baths of Hampshire county, W. Va., have a temperature of 65·5° Fahr., and are used both internally and as baths. They are highly charged with carbonic-acid gas, and are valuable waters. There are hotel accommodations, and a large bathing establishment with plunge, shower, douche, and warm baths. The waters are alterative, mildly aperient, and decidedly diuretic, and are comparable in their action to those of Vichy and Carlsbad. Capon Springs are pleasantly situated in a gorge of the North mountain, and are surrounded by picturesque scenery.

Carlsbad, in Bohemia, the queen of Austrian spas, has the most desirable reputation of all mineral springs of its class. The waters are thermal, and have been known since the middle ages. There are one hundred and seventy-three thermal springs, ranging from 84° to 166° Fahr.; the constituents are similar in all, being chiefly the sulphate and the carbonate of soda and the chloride of sodium. They are taken internally and externally in many kinds of bath; mud or peat baths, made with the mineral waters, are also given. The treatment is very effective in the cure of digestive and liver troubles of nearly every kind. Dyspepsia, gout, gravel, ulcers of the stomach, and the abdominal obesity that is common in Germany, yield to the effect of these invaluable waters. The place is extremely attractive, and the summer climate is delightful. Winter treatment is also given. The waters, and their extracted salts, are exported.

Ems, in the duchy of Nassau, has twenty thermal springs, some of which have been used since the Roman era. Their temperature ranges from 85° to 118° Fahr. The bicarbonate of soda and the chloride of sodium are the chief ingredients. They are in especial vogue for chronic catarrh, bronchitis, and laryngitis; vesical and uterine catarrh are also treated, and sterility is sometimes cured by a visit to these waters. The place is attractive: there are fine establishments for bathing, and the climate is one of the most agreeable of central Germany. The water is exported.

The Highland Springs, Lake county, Cal., have been for a few years resorted to for the cure of chronic rheumatism, as well as for the general treatment appropriate to the alkaline springs. There are now fair hotel accommodations. Three of the springs have been analyzed. They are highly charged with carbonic-acid gas, and are much used for bathing. They lie at an elevation of 1,740 feet, and are sheltered by the Mayacamas mountain from the west winds.

The Marienbad waters are similar in constitution to the Carlsbad, but contain a little iron. They are laxative, diuretic, and diaphoretic; they reduce obesity, and a curative action in cases of mental insanity is claimed for them. Marienbad is one of the most charming of the Austrian spas. Peat or mineral mud-baths are given in perfection.

The Medical Lake, in Spokane county, Washington Territory, is 1¼ mile long, from ¼ to ½ of a mile wide, and from 40 to 100 feet deep. Visitors bathe in the water, which has an unctuous feel or "texture"; but no living thing is found in it except a species of small turtle. The "Medical Lake Powders," made from this water, are used in the proportion of half an ounce to a gallon of water. The lake is little resorted to as yet, though since 1881 a town has sprung up on its banks.

Mont Dore, in the volcanic Puy de Dôme, lies high among the mountains of southern central France, 3,444 feet above sea-level. There are seven thermal springs, ranging from 100° to 113° Fahr., and one cold spring. The waters are strongly tonic and alterative, acting promptly upon the skin and the air-passages. Bronchial catarrh, asthma, laryngitis, and pulmonary emphysema are successfully treated at Mont Dore. The place is very finely appointed, and is attractive in every way; the mountain air is tonic, and the scenery magnificent.

The Rockbridge Baths, Rockbridge county, Va., are picturesquely situated on the North James river. Their temperature is 74° Fahr.; they are mainly used as a tonic bath, and near them is a sulphur spring. There is a hotel.

The St. Louis Spring, in Gratiot county, Mich., is warm and strongly alkaline, with a small quantity of iron. Dr. Kennedy's reports of cases show that the water has been especially useful in dyspepsia and neuralgia. Baths are given, apparently aiding the cure. The water was found, in boring for salt-springs, at a depth of 200 feet, and is popularly reputed to be "magnetic," but the only magnetism is that of the iron tubing through which it reaches the surface.

The Sheldon Springs, Franklin county, Vt., are four in number. They are pleasantly situated on the banks of the Missisquoi river, in sight of the Green mountains, and at an elevation of about 1,800 feet. The bicarbonate of soda (0·501 grains), and a remarkable quantity of silicic acid (0·573 grains to the pint), are the leading constituents of the springs, which Dr. Hayes calls "a very unusual alkaline-saline water." It has the usual favorable action of its class in the cure of acid gravel, gout, and vesical catarrh, and has been claimed as a cure for cancer, but without any satisfactory evidence on this point. Prof. Fordyce Barker, however, thinks that these waters are palliative of the disease, and recommends the careful investigation of their therapeutic effects. The same claim, that of a cancer-cure, is made for the bicarbonated water of Celles, in the department of the Ardèche, in southeastern France, a carbonated ferruginous water.

Vichy, France. This is perhaps the best known of all mineral waters. There are fifteen principal springs, which range in temperature from 53° to 120° Fahr. Their constitution is similar; there are 26 grains of carbonate of soda and 39 grains of all solid constituents to the pint of water. The waters are of especial use in gout, in the earlier stages of dyspepsia, in atony of the digestive organs, in affections of the liver, and in uric-acid gravel. They are counterindicated in chlorosis, anæmia, and in most diseases of debility. The baths are magnificently appointed; they lie at an elevation of about 800 feet above sea-level, and are open all the year round. The waters are exported in great quantities.

2. Saline Waters.—Baden-Baden, Ballston Spa, Bourbon-Lancy, Bourbon-L'Archambault, Bourbonne, Caledonia Springs, Hombourg, Kissingen, Luxeuil, Michigan Congress, Royat, St. Catharine's Wells, Salins, Saratoga Springs, Selters, Wiesbaden.

Restricting the term "saline waters" to those in which the chloride of sodium or common salt is the predominating constituent, the waters of this class, in full doses, are primarily aperient or cathartic; they also increase the flow of bile. When very strong, they are known as brines. These are chiefly used for bathing, and act as a strong stimulus to the nerves of the skin, and through them to the nerve-centers. Brine-vapor baths promote expectoration.

The saline waters often contain other chlorides, as well as sulphates and carbonic-acid gas, and it is in these waters that the iodide and bromide of sodium are oftenest found. These elements give to saline waters their especial value in the treatment of scrofulous affections. According to their other constituents, they are also useful in chronic rheumatism and gout. The alkaline-saline waters, containing carbonic-acid gas, as those of Saratoga, are often beneficial in dyspepsia.

Among the most noticeable saline springs are the following:

Baden-Baden, in Hesse-Hombourg, was formerly a famous gambling-place, and is still much frequented for its waters, which are thermal and slightly saline. They are chiefly used for bathing; there are twelve springs, ranging in temperature from 117° to 156° Fahr. The place itself is attractive, and is beautifully situated in a valley at the entrance of the Black Forest.

Ballston Spa, Saratoga county, N. Y. These waters, like those of the St. Louis Spring, were discovered by boring, an artesian well having been sunk to the depth of 671 feet in the unsuccessful search for oil. The waters are similar to those of Saratoga, but much more strongly saline, and richer in other mineral constituents. Four springs have been analyzed; the Lithia well contains 94 grains of salt to the pint, and 40 grains of other matters. Ballston is a quiet and pleasant town.

Bourbon-Laney, in the Saône-et-Loire, eastern France, is a town of 3,200 inhabitants and pleasantly situated upon a hill-side. The climate of the place is mild and uniform. There are six principal springs, five of them thermal. The water is limpid and inodorous, with a saltish taste. Rheumatism in every form is successfully treated at Bourbon-Laney; and scrofulous affections are also cured by the waters, which are used both internally and as baths, and have a reputation for the cure of sterility. There are good hotels and boarding-houses, and the place, like all of the less crowded French mineral springs, is inexpensive.

Bourbon-L'Archambault, a town of 3,800 inhabitants, is situated on the river Burge, at an elevation of 760 feet above the sea, among hills. There are two saline springs, both warm; the water is used internally, and in baths and douches of every description. Chronic rheumatism, scrofula, neuralgia, and hysteric paralysis, are here treated with success.

Bourbonne, in the department of the Haute-Marne, is a town of 4,100 inhabitants; its waters have been known since the time of the Romans. They are thermal, and have, like those of Wiesbaden, which they much resemble, something of the taste of broth. The bathing establishments are ample and very attractive. So efficacious are the waters in the cure of chronic rheumatism and scrofulous affections, that a military hospital has been maintained on the spot since the year 1735. During the season, from the middle of May to the middle of September, about eight hundred patients are yearly treated at this hospital.

Hombourg, formerly famous as a gambling-place, has the finest Kursaal in Germany. There are four springs; the water is strongly saline, with some iron, and is charged with carbonic-acid gas. Their temperatures are from 50° to 52° Fahr. They are especially useful in bronchial chronic catarrh, when tubercles do not exist; in abdominal plethora, in atony of the digestive tract with constipation, and in malarial engorgements of the spleen and liver. The weak and delicate are little likely to be benefited by these waters; but stronger constitutions will find relief from the maladies just enumerated.

Kissingen, Bavaria, has six springs, of temperatures ranging from 52° to 67° Fahr. They are employed internally and in baths, douches, vapor-baths, and mud-baths of many descriptions. They are purgative, diuretic, and sudorific; and in their effects as well as in their chemical constitution they resemble the waters of Hombourg, but have more variety than those, and furnish a wider range of employment. The bitter waters of Rakoezy are in favor for the treatment of engorgement of the liver. A whey-cure is also established at Kissingen. The waters are exported in large quantity.

Luxeuil is a town of 3,800 inhabitants, charmingly situated among the hills of the Haute-Saône, in eastern France, at an elevation of 1,340 feet above the sea, and protected by a wooded slope from the northerly winds. The springs have been used since the time of the Romans; they are thermal, fifteen in number, and range from 94° to 124° Fahr. They are used both internally and externally; and the bathing establishment is one of the finest in France. The waters are mildly saline; at first a gentle excitant, they afterward have a tonic and soothing effect on the nervous system, and are among the very few saline waters that can be used with advantage by delicate and nervous invalids. They are almost the only saline thermal waters in Europe that contain iron and manganese. They are much frequented for the relief or cure of nervous weakness, anæmia, dyspepsia, and uterine derangements. The place is one of great comfort and attractiveness, and is not expensive.

Royat stands 1,500 feet above sea-level, in a gorge between two mountains of basalt, near Clermont-Ferrand, in the Puy de Dôme, in central southern France. There are four thermal springs, ranging from 68° to 95° Fahr. The waters are diuretic and gently laxative, but as they contain some iron and arsenic they have also a tonic effect, which is aided by the mountain climate. Muscular and nervous rheumatism, even when subacute, chlorosis, catarrh of the bladder, anæmia, dysmenorrhœa, amenorrhœa, and nervous cardiac troubles, are relieved or cured by these waters. The bathing establishments are well appointed.

Saint Catharine's Wells, Ontario, Canada, are thirteen miles west of Niagara Falls. They are a perfect type of iodo-bromated saline water, containing much chloride of sodium, of calcium, and of magnesium. These waters are to be much diluted when taken internally; externally they are used as embrocations and for baths, of which an ample variety may be had at the Spring Bank Sanitarium.

Salins, in the Jura, eastern France, an ancient town of 6,100 inhabitants, is situated in a highly picturesque valley, at an elevation of 1,115 feet above sea-level, between the fortified summits of two mountains, Belin and Saint-André. The waters are cold, strongly saline, and have been used from immemorial antiquity. They are tonic, exciting, and alterative, and act strongly upon the lymphatic system. Scrofulous, rheumatic, gouty, and anæmic cases find relief or cure from these excellent waters, which are mostly frequented by the French. The season lasts from the first of June to the middle of September. The climate, the scenery, and the accommodations, are all very attractive. The *piscine*, or marble bathing-pool, is one of the finest in Europe.

The Saratoga Springs, Saratoga county, New York, are the most frequented of any in the United States. The waters are alkaline-saline, and are charged with carbonic-acid gas, making them pleasant to the taste. They are cathartic in their action, and are especially adapted to cases of the dyspepsia resulting from too high living, which are becoming more and more frequent in the Eastern States. The hotels are very large, showy, and fashionable, and thousands of visitors resort to them rather for the social than for the medicinal attractions of the place. Some of the waters contain a small amount of iron, which gives them a valuable tonic quality. This, however, is denied by the proprietors of rival springs in the same place, who seek to prove that even these very small quantities of iron are injurious.

Selters, in the duchy of Nassau, exports annually about two million bottles of a carbonated saline water, used chiefly as a table-drink. There are no medical establishments there.

Wiesbaden, in the duchy of Nassau, has strong saline springs, part of which are cold and part thermal; one of them, the Kochbrunnen, has the taste of chicken-broth. The waters act mainly upon the digestive organs, increasing their secretions and producing a moderate laxative effect, which is stronger if the water be allowed to cool before drinking it. Chronic rheumatism, gout, and malarial affections are the maladies that are oftenest cured by these waters. As baths they are much used, the quantity of water being abundant.

3. *Sulphur Waters.*—Aix-la-Chapelle, Aix-les-Bains, Avon Springs, Ax, Bagnères-de-Luchon, Barèges, Blue Lick Springs, Buffalo Lithia Springs, Cauterets, Clifton Springs, Eaux-Bonnes, Greenbrier White Sulphur, Red Sulphur, Richfield Springs, Santa Barbara Springs, Sharon Springs, Uriage, and Yellow Sulphur Springs.

The sulphur waters produce different effects as they disengage more or less sulphohydric acid when in contact with the air. Those which give it up slowly, and are consequently more stable, are the less exciting; they are a slow but effective alterative. Those which give it up rapidly act very promptly, whether on the skin, the bronchi, the lungs, or the digestive tract. Sulphureted hydrogen is their most constant constituent, but otherwise they vary greatly in their mineral elements, the calcic carbonates being frequently found in some of them, and in others the sulphates of soda or magnesia, and the chloride of sodium. They are effectively employed in cutaneous affections of many kinds, in various lung complaints, in stiff joints and old wounds, and in chronic poisoning by metals, and are also useful in the cure of abdominal congestions and consequent hæmorrhoids. Among many excellent sulphur waters the following may be mentioned:

Aix-la-Chapelle, in Rhenish Prussia, has four principal thermal springs, ranging from 112° to 131° Fahr. They are much resorted to for the cure of chronic rheumatism, muscular and articular, of scrofula, herpes, eczema, and acne, of lead-paralysis, laryngitis, and bronchial catarrh. The waters are generally used externally and internally at the same time.

Aix-les-Bains, near Chambéry, in Savoy, is a town of 4,200 people, 846 feet above sea-level, and surrounded by high mountains. The establishment is one of the completest in Europe; 1,200 baths and 2,000 douches are given daily. The climate is mild, and the situation, in France near both Switzerland and Italy, extremely attractive. The baths are open all the year round. The waters are thermal (113° to 116° Fahr.), and are of great service in rheumatism, gout, and scrofula. No thermal springs unites more advantages than these. The waters are not exported.

Avon Springs, Livingston county, New York, are valuable sulphur waters. They are mildly cathartic; bathing arrangements exist.

Ax, in the Ariège, southern France, 2,630 feet above sea-level, is a town of 1,700 people; the springs are so numerous as to make the whole place seem a reservoir of boiling water. Many of them flow away unused; fifty-three are employed, for the most part in medical establishments. The hottest has a temperature of 170° Fahr. Their great variety permits their use in the treatment of many different affections: they are classified as sedative waters, medium, and strongly mineralized waters, which according to the indications are successfully used in the treatment of almost every kind of rheumatism and skin-disease.

Bagnères-de-Luchon is an attractive town of 4,000 inhabitants, situated in a magnificent valley of the French Pyrenees, 2,064 feet above sea-level. There are no less than seventy-seven thermal springs, some of which contain iron; they offer a greater variety of constitution and of medicinal utility than any other known sulphur springs. The bracing mountain climate makes warm under-clothing necessary. Almost every form of skin-disease is cured or relieved by these waters, including the secondary and tertiary forms of syphilitic manifestation; and laryngitis, bronchitis, chronic rheumatism, and scrofulous affections also often yield to them.

Barèges is a mountain village, situated at a height of 4,042 feet above sea-level in a wild valley of the French Pyrenees, and overhung by ice-clad peaks. There are twelve springs; the action of the water is very effective, especially in scrofulous affections; and in old gun-shot-wounds they have such curative value that a military hospital is maintained here by the French Government.

The Blue Lick Springs (upper and lower) in Nicholas county, Ky., are excellent sulphur waters, aperient and alterative, and useful in liver engorgements, dyspepsia, and pharyngitis; used as baths they have the action of their class upon skin-diseases.

The Buffalo Lithia Springs, Mecklenburg county, Va., contain a good deal of sulphureted hydrogen gas, and are markedly diuretic. The water is of use for uric acid stone, for rheumatic gout, and for acne and other facial eruptions.

Cauterets is a finely appointed place, situated in another high valley of the French Pyrenees. There are twenty-four springs and nine different establishments, the highest 3,763 feet above sea-level. The waters are stimulating to the skin; and they are particularly effective in the cure of malarial complaints of all kinds, of chronic respiratory catarrhs and laryngitis, and the dyspepsia of persons who are inclined to phthisis.

The waters of Clifton Springs, New York, are useful in diseases where, to the ordinary indications for the use of a calcic sulphur water, those for disease of the bladder are added. The place is one of the best appointed as to bathing conveniences of any in the United States.

Eaux-Bonnes, a village in the French Pyrenees, 2,454 feet above sea-level, a small village, has no less than a dozen hotels and a bathing establishment of the first class. The waters are sulphureted sodium, both cold and thermal, and were formerly much employed in the cure of old wounds. Chronic laryngitis, or clergyman's sore throat, and many other affections of the respiratory passages, are treated with success at Eaux-Bonnes, and even the phthisis of lymphatic subjects, especially when hereditary and not far advanced.

The Greenbrier White Sulphur Springs, in Greenbrier county, W. Va., are a good aperient and alterative water. The place is well appointed, and is much frequented by pleasure-seekers. Skin-diseases, lead-poisoning, and dyspepsia are treated here with success.

The Red Sulphur Springs, in Monroe county, W. Va., are sedative to the arterial action. They allay pulmonary irritation, and are given with decided benefit in chronic bronchitis, chronic pharyngitis, and chronic laryngitis; while in the earlier stages of phthisis they are often of value. In small doses they are cathartic, in large doses diuretic. There is a hotel at the springs.

Richfield Springs, Otsego county, N. Y., is a calcic sulphur water, useful in chronic rheumatism, and in those skin disorders which depend upon diseases of the digestive tract. The accommodations are insufficient, as is too often the case in American watering-places, but the springs have become very popular within a few years.

The Santa Barbara Springs, Santa Barbara county, Cal., are thermal sulphur waters, useful in chronic rheumatism, skin-diseases, and in the later stages of syphilis. They are seven in number, and 1,450 feet above sea-level. The climate of the region is very equable, though not free from high winds and dust. There is a hotel.

Sharon Springs, Schoharie county, N. Y., are a mild sulphur water, long used in the relief of cutaneous disorders. The place is attractive and fairly well appointed.

Uriage, in the department of the Isère, in southeastern France, is situated in a charming valley of the Dauphiné. The springs have been known since the Roman epoch, and the magnificent bathing establishment stands upon Roman foundations. The waters are probably the most perfect example known of saline-sulphurous waters, constipating in small amounts and laxative in larger. They act principally upon the mucous membranes and the skin; scrofula, rheumatism, and nearly all of the dermatoses, especially among the younger patients, generally yield to them.

The Yellow Sulphur Springs, Montgomery county, Va., are fine calcic-sulphur waters, and of late years have been considerably frequented. There is a hotel, and fairly good arrangements for bathing exist.

4. Chalybeate Waters.—Bath Alum Springs, Bussang, Cooper's Well, Elster, Franzensbad, Pyrmont, Rawley Springs, Rockbridge Alum Springs, Schooley's Mountain Springs, Schwalbach, Spa.

Chalybeate or iron waters are essentially tonic and alterative; they reproduce the red globules of the blood, and are indicated in chlorosis, anæmia, scrofula, chronic diarrhœa, and the exsanguine condition that follows hemorrhages. They tend to produce constipation, and in order to be easily digested they should contain carbonic-acid gas.

The following are among the more valuable chalybeate waters:

The Bath Alum Springs, Bath county, Va., contain from 1·8 to 2·7 grains to the pint of the protoxide of iron, and are given successfully in diseases depending on impoverishment of the blood.

The waters of Bussang, in eastern France, are a mild chalybeate, well carbonated; they are valuable in anæmia and chlorosis, and in the dyspepsia of delicate constitutions. They are exported.

Cooper's Well, in Mississippi, is a valuable iron water; it is especially useful in chronic diarrhœa and in chlorosis.

Franzensbad, in Bohemia, is a strongly tonic spring; it is an alkaline-ferruginous water, and is much resorted to for the cure of diseases peculiar to the female sex. Its specialty is the mud-bath; the place supplies the mineralized peat which is used for this purpose at many other bathing-resorts, a large quantity being exported. The appointments are very extensive, including baths of every kind, and many cures of anæmia and chlorotic cases are made.

Pyrmont, the most noted iron spa in Germany, has both saline and ferruginous springs. The latter stimulate the digestion and feed the blood with iron; they are very useful in anæmia, chlorosis, menstrual irregularity, nervous headaches, and impotence.

Rawley Springs, Virginia, are a pure chalybeate, and are indicated in cases of anæmia, chlorosis, amenorrhœa, and menorrhagia.

The Rockbridge Alum Springs, Rockbridge county, Va., are astringent, and valuable in chronic diarrhœa, and in scrofula of all varieties. There is a hotel, and the region is attractive.

The Schooley's Mountain Springs are an accessible and popular resort; the water is charged with enough carbonic-acid gas to be palatable as well as tonic.

Schwalbach, or Langen Schwalbach, in the duchy of Nassau, has many iron-springs; the water is highly charged with carbonic-acid gas, has half a grain of the carbonate of iron to the pint, and is limpid and sparkling. The water bears exportation well. Schwalbach lies in a long and narrow valley. 968 feet above sea-level, and the climate is cool.

Spa, in Belgium, seventy miles east of Brussels, has eight principal springs, known from antiquity; the water is one of the best of the chalybeate waters. It is strongly carbonated and very palatable; it is used in baths and douches also, at a temperature of from 80° to 92° Fahr. It contains $\frac{3}{8}$ of a grain of carbonate of iron to the pint, and is of great use in cases where the blood has been impoverished either in quality or in quantity, as in anæmia or after hæmorrhages. The place is beautiful.

5. *Calcic Waters.*—Alleghany Springs, Bagnères-de-Bigorre, Bath, Berkeley Springs, Bethesda, Blue Ridge, Chianciano, Contrexéville, Gettysburg, Leukerbad, Martigny, Vittel.

Calcic waters are those which contain the salts of lime as the leading constituents, gypsum (the carbonate of lime) or limestone (the sulphate) usually predominating. They often contain carbonic-acid gas. Diseases of the urinary system, such as catarrh, gravel and calculus, diabetes mellitus, and dyspepsia, are often benefited by their use. They are usually constipating, but, when taken in considerable quantities, they sometimes have a purgative effect.

Bagnères-de-Bigorre. in the French Pyrenees, at an elevation of 2,000 feet above sea-level, has fifty thermal springs ranging from 66° to 124° Fahr. The splendid establishment is open all the year round. The waters are used internally and in every form of bath. The climate and the region are delightful; it is one of the most attractive resorts in Europe. The waters are not merely calcic; they contain more than half a grain of iron to the pint, and are tonic, sedative, and alterative. They are especially useful for the "mind diseased" by suffering, and in neuralgia, hysteria, melancholia, uterine affections, and rheumatism of all kinds. Persons of sedentary habit find them of special tonic value.

Chianciano, near Chiusi, in Italy, has a very abundant thermal spring, in quality similar to the Carlsbad waters. The surroundings and climate are enchanting. There is a government physician. The place is as yet frequented only by Italians.

Bath, on the Avon river, in England, is one of the best known of the calcic waters. They are used in the treatment of liver and stomach disease of many kinds, but have lost much of their former vogue.

Berkeley Springs, in West Virginia, have conveniences for bathing. The carbonate and the crenate of lime are the leading constituents of the water, which has proved valuable in cases of debility and of neuralgia.

Contrexéville, in the Vosges, situated in a beautiful valley, 1,144 feet above sea-level, has four springs. The water is used chiefly internally. It is eminently diuretic, and it is especially indicated in uric-acid gravel and the gouty diathesis. The relief is immediate. Vesical catarrh and engorgements of the prostate gland are also successfully treated at Contrexéville. There is a fine bathing establishment with casino, park, and gardens.

Leukerbad, in the Valais, Switzerland, is noted for its baths, which are common to both sexes. a feature which has survived from the middle ages in these baths alone. They are especially useful in chronic skin-diseases, such as lichen and psoriasis, and in the dyspepsia of alcoholism.

Martigny-les-Bains, in the Vosges, has two cold springs, lately improved, and a complete establishment. The waters are very efficacious for the cure of gout and gravel.

Vittel, in the Vosges, has four abundant springs and an admirable new establishment. These waters give the best results in the cure of gravel, in the gout of the anæmic, in vesical catarrh, and in diseases of the prostate gland.

6. *Thermal Waters.*—Finally, a class of waters

only slightly mineralized may be mentioned, whose efficacy is mainly due to their use as hot baths. Such are the Hot Springs, in Bath county, Va.; Lebanon Springs, in Columbia county, N. Y.; Plombières, in the Vosges, eastern France, 1,381 feet above sea-level, especially useful for rheumatic patients—the bathing establishments are magnificent, and include one of the ancient Roman thermæ; and Schlangenbad, in the duchy of Nassau, sedative in their action, and very beneficial in cases of hysteria and nervous erythism. The latter springs are known throughout Europe as "the ladies' bath."

Mention should also be made of a class of springs which have lately come into much notice and favor—the arsenical springs. Of these, La Bourboule, in the Puy-de-Dôme, France, is the most important. Its waters are of the first importance in scrofulous affections and lymphatism, in diseases of the respiratory tract, and in the cure of inveterate skin-diseases. The establishments are splendidly appointed.

The curative values of mineral waters in chronic disease, especially in conjunction with treatment at the springs themselves, are great and undeniable. But it must be remembered that they can not be taken at random by the patient. The suitable choice of springs can only be made by a physician who understands their varied properties.

MINNESOTA. State Government.—The following were the State officers during the year: Governor, Lucius F. Hubbard, Republican; Lieutenant-Governor, Charles A. Gilman: Secretary of State, Frederick von Baumbach; Treasurer, Charles Kittelson; Auditor, W. W. Braden; Attorney-General, W. J. Hahn; Superintendent of Public Instruction, D. L. Kiehle. Judiciary, Supreme Court: Chief-Justice, James Gilfillan; Associate Justices, John M. Berry, William Mitchell, D. A. Dickinson, and Charles E. Vanderburg.

Legislative Session.—The Legislature met on Jan. 16, and adjourned early in March. There were 654 bills passed, of which 614 were signed by the Governor, 27 vetoed, and 13 recalled. Important railroad, grain, and dairy bills became laws.

The railroad bill provides for a commission of three persons, to be appointed by the Governor, who hold their office two years, and have a salary of $3,500 each. It is made their duty to inquire into the condition and management of railroads in this State, and if any road violates any of the provisions of the bill, or any of the provisions of other laws in the State relating to railroads, it is the duty of the commission to prosecute that road in the name of the State. It compels the companies to furnish cars to all shippers in the order of their application, and without unjust discrimination, and to allow any person to construct warehouses of any capacity along the company's road at their way-stations.

The grain and warehouse bill simply attempts to govern the warehousing and inspection of grain at the three great grain-markets of the State, St. Paul, Minneapolis, and Duluth.

Under the dairy bill the Governor is to appoint a State Dairy Commissioner to serve for two years and have a salary of $1,800, to employ experts, chemists, agents, and such counsel as may be necessary. No person shall manufacture any oleaginous substance or substances, or compound the same, or make any article designed to take the place of butter or cheese produced from pure unadulterated milk or cream, under penalty of from $100 to $500, or from six months' to one year's imprisonment, for violation of the act.

Several bills looking to better sanitation were passed.

An important step in statutory progress was taken by the enactment of a concise and generally acceptable penal code.

A high-license bill failed to become a law. The rate of interest on sales of public lands was reduced from 7 to 5 per cent.

Three district judgeships were created.

A commission was created to locate a second State Prison.

A new Normal School was authorized at Moorhead.

One feature of the session was the consolidation of all the road and bridge bills into an omnibus bill, which appropriated $81,000 out of the internal improvement fund for 226 roads and bridges. The most interesting purely local bill was that increasing the limits of St. Paul, making its western boundary coterminous with the eastern limits of Minneapolis.

Among other acts passed were the following:

Increasing the salary of the Governor from $3,800 to $5,000, and of the Attorney-General from $2,000 to $3,500.

Provision for a census, to be taken by the town assessors and returns to be made to the county auditor, and by him to the Secretary of State.

The tree-planting bounty act extended ten years.

An experimental station for determining the intrinsic value of agricultural products by chemical and mechanical methods established in conjunction with the State University.

Finances.—The total appropriations are respectively $1,340,841, $1,317,955, and $1,195,145 for the three years ending July 31, 1885, 1886, and 1887, of which $289,840, each year, are standing appropriations. The estimated receipts are $1,259,673.94 for 1885: $1,363,510 for 1886; and $1,213,500 for 1887. According to these estimates, there will be, therefore, a deficiency of $81,168 in 1885 and a surplus of $45,555 in 1886, and of $18,355 in 1887, leaving a net deficiency for the three years of $17,258.

Population.—The census taken this year shows a rapid growth in population, especially in Minneapolis, St. Paul, and Duluth. The following is a table showing the population by counties in 1885 and 1880:

COUNTIES.	1885.	1880.	Increase.
Aitkin	1,388	366	1,022
Anoka	10,089	7.108	2,981
Becker	7,433	5,218	2,215
Beltrami	111	10	101
Benton	4,721	3,012	1,709
Big Stone	4,697	3,688	1,009
Blue Earth	26,462	22,889	3,573
Brown	13,976	12,018	1,958
Carlton	3,189	1,230	1,959
Carver	15,965	14,140	1,825
Cass	1,135	486	649
Chippewa	6,561	5,408	1,153
Chisago	9,765	7,982	1,783
Clay	10.362	5,887	4,475
Cook	322	65	257
Cottonwood	5,894	5,533	361
Crow Wing	8,743	2,319	6 424
Dakota	18,590	17,391	1,199
Dodge	10,487	11,344	857*
Douglas	12,924	9,130	3,794
Faribault	15,163	13,016	2,147
Fillmore	26,677	28.162	1,485*
Freeborn	17,364	16,069	1,295
Goodhue	31,113	29,651	1,462
Grant	5,197	3,004	2,193
Hennepin	148,737	67,013	81,724
Houston	15,482	16,332	850*
Hubbard	853	....	853
Isanti	7,031	5,063	1,968
Itasca	237	124	113
Jackson	6.110	4.806	1,304
Kanabec	1.109	505	604
Kandiyohi	12,849	10,159	2,690
Kittson	3.462	905	2,557
Lac qui Parle	7,842	4,891	2,951
Lake	453	106	347
Le Sueur	18,559	16,103	2,456
Lincoln	4,362	2,945	1,417
Lyon	7,936	6,257	1.679
McLeod	15,311	12,342	2,969
Marshall	5,560	992	4,568
Martin	6,426	5.249	1,177
Meeker	14.501	11,739	2.762
Mille Lacs	1,897	1,501	396
Morrison	9,406	5,875	3,531
Mower	15,277	16.799	1,522*
Murray	5,046	3,604	1,442
Nicollet	13,434	12,333	1,101
Nobles	5,639	4,435	1,204
Norman	8,335	.....	8,335
Olmsted	20,518	21,543	1.025*
Otter Tail	31,520	18,675	12,845
Pine	2.186	1,365	821
Pipe Stone	3,956	2,092	1,864
Polk	23,475	11,433	12,042
Pope	8,707	5,874	2,833
Ramsey	116,227	45,890	70,337
Redwood	6,488	5,375	1,113
Renville	13,153	10.791	2,362
Rice	24,941	22,481	2,460
Rock	5,239	3,669	1,570
St. Louis	20,453	4.504	15,949
Scott	14,181	13,516	665
Sherburne	5,647	3,855	1,792
Sibley	13,126	10,637	2,489
Stearns	28,712	21,956	6,756
Steele	12,733	12,460	273
Stevens	4,511	3,911	600
Swift	8,373	7,473	900
Todd	9,643	6,133	3,510
Traverse	2,860	1,507	1,353
Wabasha	17,990	18,206	207*
Wadena	3,565	2,080	1,485
Waseca	13,342	12,385	957
Washington	29,751	19,563	10,188
Watonwan	5,995	5,104	891
Wilkin	8,734	1,906	1,828
Winona	31,928	27,197	4,731
Wright	22,700	18,104	4,636
Yellow Medicine	7,863	5,884	1,979
Total	1,117,798	780,773	337,025

* Decrease.

In 1870 the population was 439,706.

The following are the principal cities, with their population in 1885:

CITIES.	Population.	CITIES.	Population.
Anoka	4,629	Crookston	4.063
Mankato	7,845	St. Paul	111,397
New Ulm	3.335	Faribault	6,459
Moorhead	2,536	Northfield	2,948
Brainerd	7,110	Duluth (city)	4,063
Hastings	3,984	Duluth (village)	13,355
Albert Lea	3,365	St. Cloud	4.360
Red Wing	6,870	Owatonna	3,280
Minneapolis	129,200	Lake	2,496
Austin	2,505	Wabasha	2,513
St. Peter	4,036	Wasach	2,514
Rochester	5,313	Stillwater	16,437
Fergus Falls	4,284	Winona	15,624

Minneapolis had 46,887 inhabitants in 1880, and St. Paul 41,473.

MISSISSIPPI. State Government.—The following were the State officers during the year: Governor, Robert Lowry, Democrat; Lieutenant-Governor, G. D. Shands; Secretary of State, Henry C. Meyers; Treasurer, W. L. Hemingway; Auditor, Sylvanus Gwin; Attorney-General, Thomas C. Catchings, succeeded by T. S. Ford; Superintendent of Public Education, J. Argyle Smith; Commissioner of Agriculture and Immigration, E. G. Wall. Supreme Court: Chief-Justice, J. A. P. Campbell; Associate Justices, J. M. Arnold and T. E. Cooper.

Financial.—The Legislature of 1882 increased the common-school fund by $100,000 per annum and decreased the rate of taxation from three to two and a half mills, which is equal to $50,000 per annum. These two items made a difference of $600,000 in the financial transactions of the State in the four years. There is not only great want of uniformity in the assessed value of property in counties, but in the different counties as compared with one another. There are 152 circuit courts annually held in the State, at a cost of from $200,000 to $300,000. Probably half their time is taken up with the trial of petty misdemeanors. The Governor recommends that the fees of district attorneys be abolished, and that they be paid a fixed salary. The following are some of the items for 1884 from the Auditor's report:

Total acreage	29,389,864
Valuation of same	$87,282,454
State tax thereon	$218,206 13
Valuation of personalty	$40,099,220
State tax thereon	$100,099 22
Polls	190,698
Educable children	457,449
State tax paid treasury	$271,513 43
Commissions on State tax	$13,630 27
Received from retail liquor licenses	$145,300 00
Receipts from privileges	$100,824 50

Public Lands.—Within the past four years the United States has disposed of 682,090 acres of land in the State, of the value of $760,362.50. Under the act of Congress of March 1, 1817, providing for the admission of Mississippi into the Union, 5 per cent. of the net proceeds of the lands lying within the State were reserved for making public roads and canals; of which three fifths was to be applied under the direction of the Legislature, and two fifths under the direction of Congress. There is now admitted to be due, and payable to the State, under the provisions of this act, and the act of Sept. 1, 1841, $43,945.81, unless the General Government is entitled to set off against this demand the $413,084.66 which was apportioned to the State by the act of Aug. 5, 1861, levying a direct tax of $20,000,000. This matter is now to be pressed before Congress. The sum of $53,771.23 is due on other accounts, but payment is refused. The State has recently secured patents for about 200,000 acres of swamp lands, and indemnity scrip for $47,888.73, at a cost of $11,410.25. The scrip has been sold at $1 an acre.

In 1884 and 1885, 1,025,585 acres were purchased and redeemed through the Auditor's office, leaving 966,226 acres still held for taxes.

Education.—In many of the counties there are more schools than are necessary to carry out that clause of the Constitution requiring that adequate school facilities shall be furnished to all the educable youth of the State. The attendance of 1884 was largely in excess of that of any previous year; especially is this increase marked among the colored people.

The University of Mississippi has been well attended during the past two years, and has graduated a larger number than usual. The university is in great need of an adequate equipment for the observatory.

The Agricultural and Mechanical College received and expended from all sources, in 1884 and 1885, $89,708.41, of which $75,000 was from the State Treasury. The attendance the current year is 369, which is 78 more than in the last term of the previous year.

The Industrial Institute and College for the Education of White Girls in the Arts and Sciences has been located at Columbus. That city offered 22 acres of land within its corporate limits, with one commodious brick building, and a large and well-designed wooden building and other improvements thereon, and $50,000 in non-interest-bearing bonds of the city. The institute was opened on Oct. 22, and 307 pupils were enrolled, and others were turned away for lack of dormitory accommodations.

The Alcorn Agricultural and Mechanical College receives an annual appropriation from the State of $11,000. It has a farm, and an attendance of 145 students. The Tongaloo University for Colored Youth had an attendance during the year of 219. During the past two years an industrial department has been added, in which blacksmithing, wagon-making, carpentry, and tinsmithing are taught. The American Missionary Society has about $60,000 invested in the institution, and assumes its maintenance, but the State aids it with an annual appropriation of $3,000. The Normal School, at Holly Springs, has had an average attendance during the past two years of 140.

State Institutions.—The Penitentiary had 812 convicts, of whom 708 were colored, 103 white, and one Indian, an increase of 41 in two years. During the past four years $58,121.52 has been paid into the treasury by the present lessees. The Insane Asylum, at Jackson, has 417 patients. The products of the farm are increasing, and now amount to $15,347.62. The East Mississippi Insane Asylum was opened on Jan. 12, 1885, and has received 273 patients, has discharged 34, while 21 have died, and five have escaped. There are at present 213 inmates. The Deaf and Dumb Institute is in a flourishing condition. The Institution for the Blind has about 30 inmates.

Railroads.—The Railroad Commissioners, appointed in pursuance of the act of March 11, 1884, were enjoined shortly after their organization from proceeding to enforce the statute, and from interfering in any manner with the business and operations of the railroad companies. The suits in the State courts were decided adversely to the commission, and they appealed to the Supreme Court of the State. This court held that the State had the power originally to prescribe for a railroad company, created by it, the rates of compensation, and that any exercise of this power, which does not hinder or burden interstate commerce or obstruct its freedom by discriminating against persons and property of other States, is not an infringement of the constitutional provision which vests in Congress the power "to regulate commerce among the several States." But when the State has granted to a company the right to fix its rates within maximum limits, the State can not afterward, the Court held, interfere with the charges fixed by the company if they are within the limits prescribed. From these decisions only the Natchez, Jackson, and Columbus Railroad Company, which had no maximum of rates prescribed in its charter, prosecuted an appeal to the Supreme Court of the United States. The suits instituted in the Federal court were also decided adversely to the commissioners, and they took an appeal to the Supreme Court of the United States. That Court has recently delivered an opinion reversing the District Court, upholding the constitutionality of the supervision law in all particulars.

The Levees.—The Board of Levee Commissioners in Yazoo-Mississippi Delta, after some unavoidable delays, negotiated bonds and entered on the construction of levees late in 1884. They put up a large amount of new levees that had been carried away by the floods and repaired the old, so that the whole river front from the hills in De Soto County to the levees of the lower district has been closed against ordinary floods; but still higher and larger levees are needed to make permanent the improvements already begun.

Political.—The Democratic State Convention met in Jackson, on the 19th of August, and nominated the following ticket: For Governor, Robert Lowry; for Lieutenant-Governor, G. D. Shands; for Secretary of State, George M. Govan; for State Treasurer, W. L. Hemingway; for Auditor of Public Accounts, W. W. Stone; for Attorney-General, T. Marshall Miller; for Superintendent of Public Education, J. R. Preston. The Republicans had no ticket in the field. On Nov. 3 the total vote for Governor was 89,854, of which Lowry received 88,783. The Legislature of 1886 is composed as follows: Senate, 1 Republican and 39 Democrats; House, 9 Republicans, 119 Democrats, and 2 Independents. On the 7th of March, Edward C. Walthall, Democrat, was appointed by the Governor United States Senator to succeed Senator Lamar, who became Secretary of the Interior.

MISSOURI. **State Government.**—The following were the State officers during the year: Governor, John S. Marmaduke, Democrat; Lieutenant-Governor, A. P. Morehouse; Secretary of State, Michael McGrath; Treasurer, James M. Siebert; Auditor, John Walker; Attorney-General, D. G. Boone; Land Register, Robert McCulloch; Superintendent of Public Schools, William E. Coleman; Railroad Commissioners, George C. Pratt, James Harding, and W. G. Downing. Judiciary, Supreme Court: Chief-Justice, John W. Henry; Associate Justices, Thomas A. Sherwood, Elijah H. Norton, Robert D. Ray, and Francis M. Black.

Legislative Session.—The Legislature met on the 7th of January and adjourned on the 25th of March. Among the results of the session were the following acts:

To appropriate money to build a workshop, etc., for the Missouri Penitentiary.

To appropriate money to build a laboratory for the School of Mines and Metallurgy.

To appropriate money to erect additions to the Lunatic Asylum at St. Joseph.

To appropriate money for completing and furnishing additions to the State University building at Columbia.

To appropriate money for the purpose of completing an addition to the Normal School building at Warrensburg.

To establish an insane asylum in the southwestern part of the State, to be known as State Insane Asylum Number Three, and appropriating $200,000 therefor.

To provide for the appointment of assistant prosecuting attorneys.

To provide for issuing funding bonds in redemption of bonds of the State maturing in 1886, 1887, and 1888, such bonds to bear not over 4 per cent. interest, and to be payable in twenty and redeemable in five years, and not to exceed $7,000,000 in amount.

To facilitate the giving of bonds, to authorize corporate suretyships therein, and to regulate the enforcement thereof.

To prevent persons from breaking down bridges and culverts, from frightening horses, mules, and other animals attached to vehicles of any kind, or ridden by persons, by moving steam-engines of any kind, corn-mills, cane-mills, saw-mills, reaping and mowing machines, on public highways.

Providing for a State veterinary surgeon.

To provide for the ascertainment of and payment for damages done by municipal corporations to private property for public use.

In relation to cities of the second class.

In relation to the taxation of theatrical and minstrel performances by counties, villages, and cities of the third and fourth class, etc.

Empowering cities of the fourth class to make special levy for building purposes.

To provide means for disincorporating cities of the fourth class.

To secure equal representation in all cities and towns in the State.

In relation to coroners.

To require railway companies or corporations, mining companies or corporations, express companies or corporations, and telegraph companies or corporations, to give notice to their employés before reducing the wages of such employés.

Requiring railroad, bridge, tunnel, or other transportation companies to furnish a caboose or other suitable car for the transportation of shippers of live-stock to the destination of such shipments.

Concerning benevolent, religious, scientific, and educational corporations.

Authorizing the formation of a fire department pension fund and relief association in any city or county of 50,000 inhabitants or over.

Concerning the reporting and publishing of opinions of the Supreme Court and Court of Appeals.

To provide for the certification and transfer of causes pending in the St. Louis Court of Appeals to the Supreme Court of Missouri.

To establish a Criminal Court in Buchanan County.

To suppress selling, lending, giving away, or showing to any minor child any paper or publication principally devoted to illustrating or describing immoral deeds.

Relating to assignation and bawdy houses.

To protect guests of hotels and boarding-houses against the use of oleomargarine and other unwholesome compounds.

To protect hotel and boarding-house keepers.

For the preservation of the health of female employés.

To protect the property of manufacturers, bottlers, and dealers in mineral waters, soda-water, and other beverages from the loss of their siphons, bottles, and boxes.

To permit owners of land to construct drains for agricultural purposes.

To prevent the stealing, mutilation, etc., of ballots.

Relating to libraries in cities, villages, towns, and townships.

To provide uniform rules for the measurement of stonework, earthwork, brickwork, etc.

To regulate the weighing of coal at mines.

To regulate sales of real estate under mortgages and deeds of trust.

To erect an additional penitentiary.

To provide for the establishment of reform schools in counties of over 50,000 inhabitants.

To regulate the assessment, levy, and collection of taxes on building and loan associations.

To bar the recovery of taxes against real estate unless the suit is brought within five years.

To enlarge the course of study in the School of Mines and Metallurgy.

An amendment to the Constitution was proposed relative to taxation for road and bridge purposes, which is to be submitted to the people in 1886. An act was also passed providing for the organization of the Kansas City Court of Appeals. The congressional apportionment act was amended so that the Sixth District shall be composed of Boone, Howard, Saline, Cooper, Pettis, Moniteau, Morgan, Benton, Hickory, Camden, Polk, and Dallas counties; Twelfth District, Cass, Bates, Vernon, Barton, Henry, St. Clair, Cedar, Dade, and Jasper; Thirteenth District, Greene, Webster, Christian, Lawrence, Newton, McDonald, Barry, Stone, and Taney. A proposition to submit a prohibitory amendment to the people was defeated by a close vote. George G. Vest, Democrat, was re-elected United States Senator.

MONTANA. **Territorial Government.**—The following were the Territorial officers during the year: Governor, B. Platt Carpenter, succeeded by S. T. Hauser; Secretary, J. S. Tooker, succeeded by William Webb; Treasurer, Daniel H. Weston; Auditor, Joseph P. Woolman; Superintendent of Public Instruction, Cornelius Hedges, succeeded by W. W. Wylie; Attorney-General, William H. Hunt. Judiciary, Supreme Court: Chief-Justice, D. S. Wade; Associate Justices, W. J. Galbraith and John Coburn, succeeded by C. R. Pollard.

Legislative Session.—The Legislature met on Jan. 12, and adjourned on March 12. Ninety bills became laws. Among them were the following:

To incorporate the city of Billings.

To prevent the branding of cattle during certain seasons.

Creating the county of Fergus.

To facilitate the service of process upon personal property, and the transfer thereof in certain cases.

To incorporate the city of Missoula.

Authorizing county commissioners to award contracts for keeping roads in repair.

In relation to road-taxes.

For the appointment of road supervisors.

To encourage the propagation of quail, and to punish the killing thereof.

Concerning representation of quartz-lodes.

To prevent persons hunting in inclosures of others.

For the annexation of a portion of the Crow reservation to Yellowstone County.

To suppress prize-fighting.

To regulate and organize the militia.

To prevent the dissemination of contagious and infectious diseases among animals.

To prevent deception in the sale of butter and cheese.

Creating the office of county attorney.

For the better protection of the live-stock interests of Montana.

Relative to water rights.

To provide for the organization of the Legislative Assembly.

To authorize the levy of an additional mill for Territorial purposes.

To amend an act regulating insurance companies.

To amend the game laws.

To suppress hurdy-houses and dance-houses.

To amend an act to authorize school trustees to issue bonds to build or provide school-houses.

To provide text-books for the public schools.

Regulating assessment of life-insurance companies.

Valuation of Property.—The assessed value of property in 1882 was $33,211,319.12; 1883, $44,698,461.28; 1884, $49,746,268.91; 1885, $52,847,536.40. The property is not assessed at its full value, and the assessment does not include mines. The assessed valuation of the counties in 1835 was as follows:

COUNTIES.	Valuation.
Beaverhead	$2,560,410 00
Choteau	3,620,029 00
Custer	5,249,717 00
Dawson	2,024,143 00
Deer Lodge	3,899,894 00
Gallatin	4,969,970 00
Jefferson	2,026,076 40
Lewis and Clarke	8,026,940 00
Madison	2,579,836 00
Meagher	5,687,855 00
Missoula	2,573,926 00
Silver Bow	7,571,461 00
Yellowstone	2,057,279 00
Total	$52,847,536 40

Population.—No census of the population of the Territory has been taken since 1880, at which time it was 39,157. The total vote cast at the election in November, 1884, was 26.969. The total vote cast in 1882 was 23,318. The increase has been greater during the past two years than at any other period, and the population may be fairly estimated at 100,000 to 110,000.

Agriculture.—The numerous valleys of the Territory are remarkably fertile, and with irrigation yield large returns in wheat, oats, barley, and all kinds of vegetables, unsurpassed in quality. Owing to the high price of labor here, as in all mining countries, and the great distance from the markets of the world, farmers have been unable to compete successfully in foreign markets with those of Dakota on the east and Washington and Oregon on the west; consequently, nothing more is attempted than the supply of the home demand. In those portions of the Territory where attention has been given to the cultivation of fruit-trees, it has been demonstrated that the hardy varieties can be raised. Small fruits succeed everywhere in the Territory, and the yield is enormous.

Reservations.—Three Indian reservations in the Territory embrace an area of 45,000 square miles, including nearly 30,000,000 acres of the finest agricultural and grazing lands on the continent. The Governor urges the necessity of cutting down these reservations to a size commensurate with the needs of the Indians. "The greater portion of these lands," he says, "so necessary for the use of actual settlers, is of no use whatever to the Indians. Since the extinction of the buffalo, there is little or no game, and but a small portion, if any, of these lands are cultivated."

Stock-Raising.—Next to mining, stock-raising is the largest industry. For the fiscal year ending Dec. 31, 1884, the whole number of horses assessed was 99,843; mules and asses, 2,534; sheep, 593,896; cattle, 509,768. Since the assessment, a large number of cattle have been driven into the Territory.

Of the cattle shipped into the Territory, a large proportion came from Ohio, Illinois, Iowa, and other Eastern cattle-raising States. The animals are all of good grade, and great attention has been given to the selection of thoroughbred bulls. Over 90 per cent. of these cattle is owned by fewer than ten companies, the members of which are nearly all home capitalists.

Mining.—Gold was discovered in small quantities in 1861, but none to speak of until 1862, when mining began in earnest and on a large scale. For ten years the average yield of gold from placer-diggings was $12,000,000 to $15,000,000 per annum. This class of mines was rapidly exhausted. As the placers gave out, gold and silver quartz-mining was begun, which required capital, and was slow in development. Ten years ago the yield from quartz-mining was not over $1,000,000 per annum; now it is about $21,000,000.

Of the annual product of the quartz-mines, about $10,000,000 is silver. In all of the silver, there is from 20 to 35 per cent. of its gross value gold, chemically combined with it. One fourth of the value of the product of the copper-mines is silver chemically combined with the copper. The lead would not pay for the mining except for the silver it contains, and its uses in collecting the silver and gold in the process of smelting. The copper-mines at Butte, with over $2,500,000 in their works alone, are barely paying running expenses. A very little further depreciation of their silver contents, and that industry would be ruined.

SIR MOSES HAIM MONTEFIORE.

MONTEFIORE, Sir MOSES HAIM, an English philanthropist, born in Leghorn, Italy, where his parents were visiting, Oct. 24, 1784; died in London, July 28, 1885. The earliest record of the Montefiore family is a silk embroidered curtain suspended before the Ark in the Ancona synagogue, bearing a Hebrew inscription, which gives the date of the gift as 1630, and the name of Rachel Montefiore as the worker. Early in the eighteenth century, Moses Montefiore settled in London, where his son, Joseph Elias Montefiore (father of Sir Moses), became a prosperous merchant. On leaving school, young Montefiore was taught a trade, and was first apprenticed to a provision-house, but in early manhood he entered the London Stock Exchange, his uncle having purchased for him the right to practice as one of the twelve Jewish brokers licensed by the city. In 1812 he married Judith Cohen, whose sister had married Nathan Meyer Rothschild, and became associated with the Rothschilds in their financial operations, with such success that in 1825 he retired from business. "Thank God and be content," was his wife's counsel. He had accumulated wealth in abundance, and could now turn his mind to the dream of his life, the relief of his suffering brethren in all lands where political rights were denied them, and the alleviation of suffering humanity of every creed.

In 1827 he and his wife made their first journey to Palestine. It is possible that the abject condition of the Israelites there aroused Montefiore to strive for their betterment. Henceforward "the peace of Jerusalem" became his battle-cry, and seven times he visited the Holy Land. In 1837 he was elected Sheriff of London (the Jews were still under civil disabilities), and was knighted by the Queen, with whom his relations were always kindly, dating from the time when she and her mother, the Duchess of Kent, visited Montefiore's villa at Ramsgate. But political and social advancement had no charms for him. In the winter of 1838 he undertook his second journey to Palestine, with the avowed purpose of introducing industrial and agricultural schemes among the poverty-stricken Hebrews. He secured the lively interest of Mehemet Ali, who promised the Sultan's furtherance of his plans, but on his return to England a new and more urgent matter claimed his attention. The Jews of Damascus were accused of using Christian blood—an old charge, which was alleged against the early Christians by their heathen persecutors—and harrowing details of outrages by the mob in the East startled all Europe. Montefiore traveled to Alexandria, and secured the release of the accused Jews of Damascus. Thence he proceeded to Constantinople and obtained from the Sultan, Abdul Medjid, a firman declaring the groundlessness of the blood accusation, and affirming equality of the Jews with his other subjects. On his return, Montefiore had an audience with Louis Philippe. In 1846 Montefiore journeyed to Russia, accompanied by his wife, to secure civil liberty for his oppressed Russian brethren. Only slight concessions were made by the Emperor Nicholas; but Montefiore's visit was of profound significance for the Jews themselves, as it gave them a stimulus to social and educational reform. In 1858 the abduction of the Jewish lad Edgar Mortara aroused the civilized world, and Montefiore went to Rome in 1859. But Pope

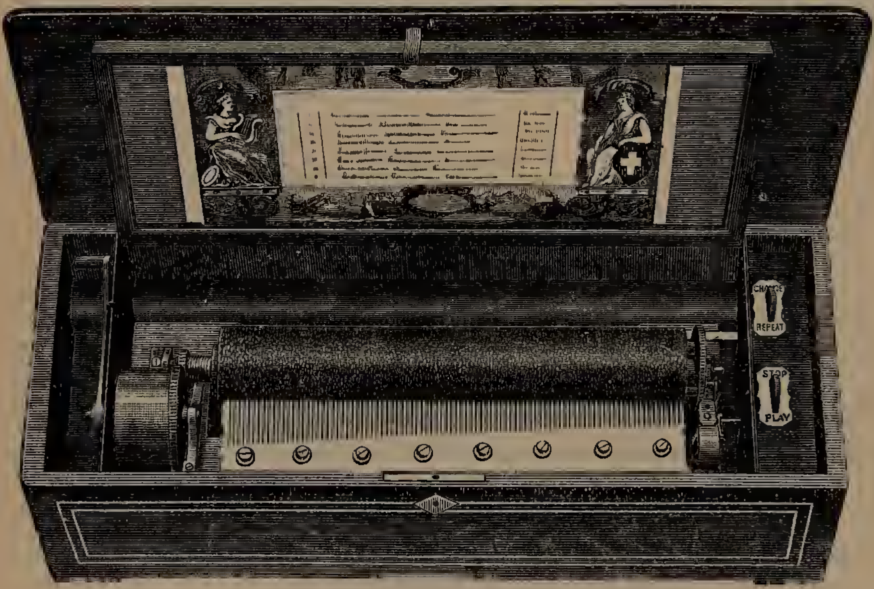
Pius IX declined a personal interview, and the mission failed—the first and only time in Montefiore's history. In 1860, he raised a fund of over £12,000 for the relief of Jewish refugees from Morocco; and in the same year, when the Christians of Syria were attacked by the Druses of Mount Lebanon, he headed a subscription for their benefit, his committee raising £22,000. On Sept. 24, 1862, Montefiore lost his wife, and her Ramsgate mausoleum and the college in her name attest the intensity of his affection. She was a lady of wide culture, charming personal presence, and of rare religious fervor. But Sir Moses's grief was interrupted by a new call, a visit to Morocco in 1863, to protect the persecuted Jews. He was kindly received by Queen Isabella in Madrid, and secured the release of the Jewish prisoners in Tangiers. At his suggestion, the Sultan issued an edict protecting Jews and Christians. In 1866 he visited Palestine, when it was suffering from drought and disease. In 1867 he journeyed to Bucharest in behalf of the Roumanian Jews. In 1872 he visited Russia, and was cordially received by the Emperor Alexander II. In July, 1874, he undertook his seventh journey to Palestine, to investigate the condition of the Jews, a large testimonial fund for their benefit having been raised in his name. On Oct. 24, 1883, his entrance upon his hundredth year was celebrated throughout the world, and the completion of his centennial year was also commemorated in Europe, America, and Australia; the Christian pulpit and press echoing his warm praise. He died in full possession of his faculties, his last words being "I thank God." Sir Moses was tall and commanding in appearance. His countenance was genial, his manners those of an English gentleman of the olden school. He was strictly conservative in belief and practice, and was never ashamed to be known as Montefiore the Jew. He had warm Christian friends, and remembered in his will Christian clergymen and charities. He was of a very cheerful temperament, and many stories are told of his wit and humor. A full history of his life is in course of preparation by his friend, secretary, and co-worker, Rev. Dr. L. Loewe.

MUSICAL INSTRUMENTS, AUTOMATIC. What we purpose to treat as mechanical or automatic music is (1) such music as is rendered without the aid of human manipulation; (2) that which is produced by merely mechanical means; (3) that which is produced partly by mechanical means and partly by the action of the forces of nature; and (4) that which is produced partly by mechanical means and partly by human manipulation.

The Æolian Harp.—In its earliest and crudest form this doubtless consisted of no more than a reed, a fiber, or a tendon drawn across an aperture. Others were added, until in the later age we have an instrument of rare and wonderful delicacy of sound. The Æolian harp, as now constructed, is usually about three feet long, five inches broad, and three inches deep. It is generally made of pinewood, with beech ends, for insertion of tuning and pitch pins. There are also two narrow bridges of hard wood, over which a dozen catgut strings are stretched. They are tuned in the most exact harmony possible. There are usually two sound-holes in the sound-board. The instrument is fitted in a window, sufficiently open to admit its introduction obliquely to the direction of the wind. The evening time is best. The sounds, as the wind plays over the chords, are pure and so perfectly in accord that no tuning we might accomplish could improve them. We are impressed by them as by a far-distant, softened wail, to be followed, as the wind-pressure increases, by more and more angry notes as we mount to those dissonances in the next higher octave, until the abating force suffers the lower beautiful harmonics to predominate again.

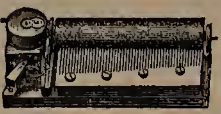
The Statue of Memnon.—Of the fact that the statue of Memnon uttered sounds when the morning sun shone upon it, there can be no doubt. As to the mode, there is great diversity of opinion. The one most generally received ascribes the sound to some peculiar property in the stone itself, of which the Egyptian priests artfully took advantage, though in what way is quite uncertain. A theory advanced was that they might have fabricated, by mechanical art, a kind of speaking head, the springs of which were so arranged as to respond to the warmth of the rising sun. This theory could scarcely be maintained in the face of the fact that Cambyses broke the statue from the head to the middle of the body and found nothing. It was the general belief among the Egyptians, as well as strangers who were attracted from far and near, that before being broken the statue uttered seven vowel sounds or tones, and they added the word mysterious. The sound was said to resemble that given by the breaking of a harp-string. Another theory was that the stone was struck by a hammer, wielded by human agency. It is worthy of remark that in the lap of the statue is a stone that emits a metallic sound; also that there is a square space cut in the back part of the stone, in which a person could be hidden from the most scrutinizing observer in the plain below. It is doubtful, however, if any one could impose upon a people for a long series of years, and even ages, by hiding in such a hole and using a hammer. There are always incredulous persons, ready to investigate, and the theory becomes in a degree untenable. Another theory was that nature and art combined produced the varying sounds, and it is supported by scientific discovery in other portions of the world. Alexander von Humboldt speaks of sounds that can be heard proceeding from the rocks on the banks of the Orinoco, in South America, at sunrise. He attributed them to confined air making its escape from crevices or caverns, owing to the increasing difference of internal and external temperature at the falling of the sun's rays upon the rocks. At Karnak, on the eastern bank of the Nile, there was a similar peculiarity mentioned by the *savants* who accompanied the first Napoleon on his Egyptian expedition, and verified by later expeditions. There is, on the California coast, a section of gravelly shore that emits musical sounds of most entrancing character when walked over. On the Susquehanna river is also a section of musical sand, which gives out tones equaled only by the tones of the Æolian harp.

In the eighteenth century mechanical powers were first directly applied to other musical instruments than bells. From the ease with which the ponderous bells were struck, no doubt grew the idea of utilizing machinery for musical sounds in other directions: music-boxes, the cuckoo-clock, and the bird-organ, were probably the primal successful ventures, and from them has grown an enormous industry.



MUSIC-BOX.

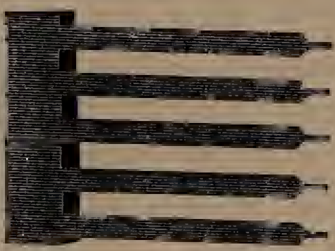
Music-Boxes.—These have a metal roller or cylinder with projecting points; a steel comb, the vibration of the teeth of which gives the sounds; a spring to give the power, and a fly-wheel or fan to regulate the motion. The music is first arranged by skilled artists. A selection having been made, the requisite intervals are marked upon the cylinder in parallel lines running both lengthwise and around the cylinder. If the cylinder were split open and flattened out it would give a proper idea of the system of laying off and marking the music. The surface in reality constitutes a scale on which the music is written by boring holes in the designated intervals, then driving in steel points or fingers which shall at the proper instant touch the appropriate sounding tooth of the comb. The work is one which requires the utmost mathematical accuracy. The pins in the cylinder are made with the extreme of delicacy and temper. A wire is first drawn, then by successive indentations divided into requisite lengths. These, being driven into the cylinder, are broken off, leaving the cylinder section of a determined length. When the points have been driven, the cylinder is filled with molten cement, and placed on a lathe and caused to revolve very quickly. The cement adheres to the inside surface, and when cooled holds the points as firmly in their places as if they formed a part of the original metal. The comb is of the finest steel and tempered with the extreme of delicacy. The tone of each tooth is lowered or raised by filing near the base for lowering, or at the point for sharpening. Originally each tooth was independent of each other tooth, and held to a bar by its own screw. The comb in which all the teeth and the base are of one piece is the result of steady improvement. At first two teeth were made on one piece, then three, at last the whole comb. When ready for use, the machine is wound up, and as the cylinder slowly revolves a cylinder-point comes in contact with the under side of a comb-tooth, and, crowding up, lifts it from its position of rest. As the point passes on it suddenly releases the tooth, which, flying back, is left in resonant vibration. The movement of the cylinder is steady and strong, the consecutive notes coming as a result with extreme regularity. Each revolution of the cylinder begins and completes a tune. The earlier music-boxes were made as evidences of skill, then for ornament. Their music being recognized as of superior quality, their manufacture was entered upon with zest; and they were fitted to snuff-boxes, and the name musical snuff-box given them. This seems to have been about the first public introduction. At a later date they were fitted into the bottoms of decanters. The lifting of the decanter to pour out a glass of wine would set the works in motion, and the sparkling music added to the delights of the sparkling wine. As the trade increased and improvements were made, they were inclosed in albums, work-boxes, cigar-cases, writing-desks, automatons, dolls, and formed an important feature in clock-work, the hours being marked by selections of rich music instead of strokes on a bell. On account of the richness of the tone caused by the vibration of the solid bar



CYLINDER AND COMB.

MUSICAL DECANTER.

TOY MUSIC-BOX.

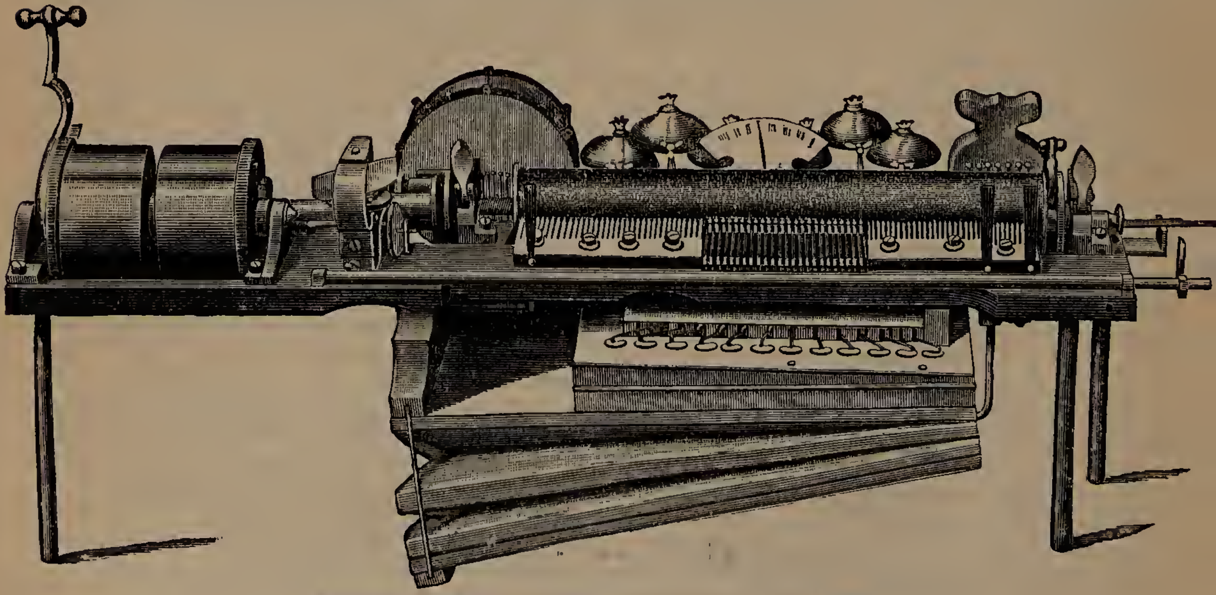


SECTION OF COMB.

of steel of which each tooth in the comb was formed, music-boxes became extremely popular. The agreeable surprises they were capable of giving, owing to their being frequently concealed from view, added not a little to the entertainment they afforded. In building a music-box the tunes are first selected, and invariably transposed to the key of C or G. This is for the purpose of avoiding accidentals, and every note that is not to be used is discarded from the comb. By this procedure the comb avoids the chromatic scale, or in fact any scale at all. It contains exclusively the notes that belong to a given cylinder and its tunes. Music-boxes were invented about the beginning of the present century, most probably in Switzerland, which always has been, as it now is, the chief seat of their production. The house of Moïse Paillard is the oldest of which any authentic information can be had. It was established in 1814, and its earliest work was wholly by hand. It was the custom for the employés to take their work to their homes, and when completed it was returned to the master. This insured the extreme of skill and inventive ingenuity. The popularity of the so-called ornament increased, and its manufacture promptly kept pace. Machinery was introduced, improvements made, suggestions and devices adopted, patents secured, houses established, and a trade of many thousand a year entered upon. To the brain of Amédée Paillard, of Ste. Croix, in Switzerland, seems to be due the credit of the greatest amount of inventive genius in this department of automatic music. As a result of his investigations and studies in applying mechanical devices, the music-box of 1814 would scarcely be identified with the instrument of to-day, so great has been the advancement both in construction and tone. There are at the present writing more than twenty large manufactories scattered throughout and among the rugged hills of the Switzer's mountain home, and hundreds of thousands of instruments are annually manufactured and exported. What was first a little toy was destined to a rapid growth. One improvement after another having been added, a music-box can now be found of almost any size or shape, ranging from the child's toy of a single tune to the size of a piano with a series of airs limited only by the length of the buyer's purse. As the size of an instrument increases, so does its capacity for music. The cylinders range from one and a half to thirty-seven inches in length. In the larger instruments it is usual to have the steel comb in sections. Where more than one tune is set to a cylinder, the spaces between the rows of teeth are increased, and the second series of pins in the cylinder are inserted independently of the first series. Size increases both volume and richness of tone. A cylinder ten inches long can be made to play six, eight, ten, or twelve airs well; but will, of course, play six or eight airs better and with more sweetness and harmony than if attempting a greater number, for the reason that more points on the cylinder and more teeth in the comb can be utilized for fewer airs. A note ordinarily consists of the single bar standing out like a tooth in a coarse comb. The end of the bar is suddenly brought to a point by curved cuttings on either side, bringing the extreme end down to the minimum of surface required by the passing point in the cylinder. Should it be necessary to strike a given note a second time, and required to give the stroke before the vibrations resultant from the previous stroke had ceased, it is obvious that the approaching peg or point would touch the tooth while still in vibration. The result would be a rattling dissonance, which, although short, would be jarring to the sensitive ear and detract from the silvery sweetness of the tone. To obviate this difficulty a delicate spring is adjusted to the under side of each tooth, which, because of its being on the under side and out of the range of vision, is not readily noticeable. It is acted upon by the approaching cylinder-pin, and, gently reaching up, presses against and stops the vibrations, so that the cylinder-point reaches the tooth in its normal position. These metal dampers can be affixed only to the larger notes. On the smaller ones, even to the extremest, a damper is also used; but the steel wire being too heavy, a section of a barb from the larger vexillum or membranous web of the wing-feathers of an aged hen are utilized. The springy stiffness of the semi-horny concavo-convex fiber renders them particularly desirable. They are fitted with glue or cement to the required position, and last as long as steel damper-springs. The motive power of a music-box is a coiled spring, ranging in size from five eighths of an inch drum diameter and three eighths of an inch in width for the smallest instrument, to five and a half inches drum diameter and three and a quarter inches width for the largest. An additional length of running time is given by additional springs, boxes having been made to run as long as four and a half hours at one winding. In order to render bass notes, a leaden weight is fixed to the under side of the tooth marked for the required tone. A cursory examination of the notes will show a systematic gauging of size and thickness. The whole is laid out with the utmost mathematical precision. As a result of the nicety of construction, two notes side by side, and apparently alike in size, construction, and tone, may be octaves each of the other. The latest feature in the development of the capacities of the finished music-box is the duplex arrangement. It consists of a set of double cylinders revolving and playing together. When it is desired to play a selection, as from an opera which is too long to be contained on one revolution of a single cylinder, the shifting to a new set of pins could not be accomplished without an awkward pause. To obviate this interruption, one barrel of the duplex shifts while the other is playing. When this has been accomplished, and the first is fully under way, the second shifts, and the two go on together. By this method music of any length can be enjoyed without any of the displeasing effects of waiting machinery. Various other additions and modifications have been made as the taste or ambition of the makers has suggested; and bells, drums, and castanets are made to play their share, according to the style of music desired. In the earlier history of the instrument, it was the custom to have these latter features concealed, but of late years pains seem to be taken to group them in full view. A singular improvement in the pointing of the cylinder gives the effect of a sustained note. It is called the *tremolo.* The organ, violin, brass instruments, and the human voice, are capable of prolonging a musical note indefinitely; the harp, guitar, piano, etc., can not, and until recently the music-box could not. In order to remedy the matter in the case of the vibrating teeth, a series of points are added to the cylinder, and the requisite teeth are repeated as many times as required. As a result the teeth of the same tone are consecutively and rapidly struck, the tone sustained, and blended with its companion-notes. The instrument containing this improvement is styled the *mandoline.* In the style known as the *forte-piano* there are two combs, one being loud, the other soft, to play the forte and piano parts. The *organocleide* is a deep-toned mandoline. Its tremolo, instead of being used on occasional notes or in the treble alone, as in the mandoline, is used throughout the bass. Of course it requires many teeth, and for six airs will take a cylinder at least seventeen inches long. The *organocleide piccolo* has in addition a small comb of very high notes, and derives its name from the piccolo-flute. The *harp-zither* is a recent attachment. It consists of paper rolled and held gently against the teeth of the comb, and causing the peculiar muffled sound recognized in the harp and zither. Its addition is a matter of taste. A further variety is given by the addition of bellows and reeds as in the parlor organ, thus approaching nearer to orchestral effects. The more the instrument is added to, the greater must be its size and consequently its expense. There are about thirty styles, some simple and others extremely complex.

ZITHER ATTACHMENT.

The Repeater Watch made by a Russian peasant in the last century was a marvel of construction, and is still preserved in the museum at St. Petersburg. It is no larger than an



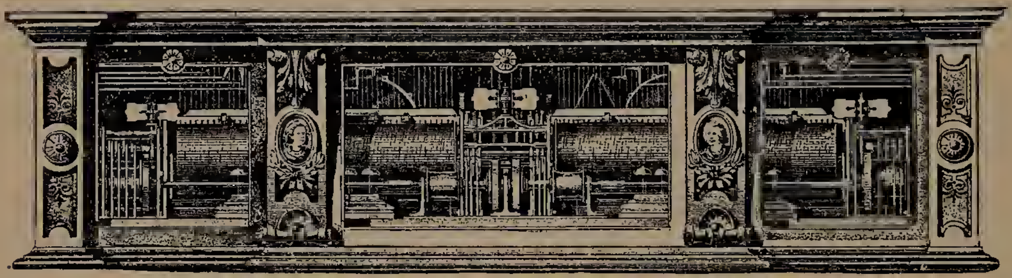
MUSIC-BOX WORKS, WITH BELLOWS AND REED ATTACHMENT.

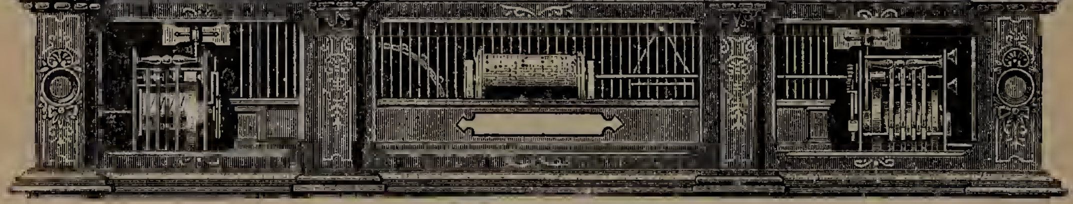
egg, and, while it contains the necessary works for a repeater, it has the requisite mechanism for a religious scene. There is a representation of the tomb of Christ, with the Roman sentinels on guard. On pressing a spring, the stone is rolled away from the mouth of the tomb, the sentinels fall down, and the holy women enter the sepulchre. Immediately a solemn chant is played, and its muffled sweetness gives the effect of its coming from unseen depths. At its conclusion the various figures return to their first positions.

Carillon or Mechanical Chimes.—This is a series of bells fixed to a frame and struck by hammers from without the bell. A key-board attachment is usually provided, but, owing to the fact that carillon-playing is a matter of no small physical exertion, it is usual to build a clock-work machinery analogous to the barrel-organ. The power is applied by means of a heavy weight instead of a crank or spring. The barrel is pricked for various tunes, generally seven or eight, a change being effected by shifting the barrel slightly. The pins inserted in the pricked spaces of the barrel come in contact at the proper moment with levers which raise the hammers and release them to fall upon the bell at the moment when the pin on the barrel quits the lever. The application of this principle on the large scale necessary for carillon-ringing is fraught with difficulties which the rude and unscientific system still prevalent on the Continent quite fails to meet. The trouble lies in the weight to be overcome in lifting the striking hammer. As the pins on the barrel have to take this whole weight, it is necessary that they should be very strong. The barrel thus becomes so cumbrous and expensive an affair as to add very much to the difficulties of arranging a large carillon-machine. In machines made under the systems of the past, the method of striking the note did not conduce to precise accuracy in the time of sounding, and correct time was greatly interfered with. This was caused by the greater resistance offered by the larger hammers while the barrel was driven by the same uniform weight for large and small. The word *carillon* is derived from the Italian word *quadriglio*, or quadrille. A dreary kind of dance-music, of which many specimens still survive, seems under this name to have come from Italy, and been widely popular throughout Europe in the sixteenth century. The airs, or portions of them, were hummed, or whistled, or sung on all possible occasions—in the home, on the street, in the various places of amusement; and as the town bells, whether in the cathedral or the market-house belfry, were regarded as popular institutions, it is possible and even highly probable that the quadriglio was the first kind of musical tune ever arranged for a peal of bells—hence the name. In the seventeenth century carillons were found in all the principal towns and cities in the Low Countries. Up in every well-stored belfry in Belgium there is a small room devoted to a large revolving barrel exactly similar in principle to that of the music-box, but at what date it was first introduced in place of the flesh-and-blood *carillonneur* is difficult to ascertain. The most celebrated carillon or machine chimes in the world are in the Halles or market tower at Bruges. In the belfry are forty-eight bells, some of them weighing singly six tons. They are played upon every quarter-hour by means of an immense copper cylinder or barrel, communicating with the clock, and weighing about nine tons. Its surface is pierced by 30,500 square holes, so that an infinite variety of airs may be set upon it by merely shifting the iron pegs that lift the hammer. A Latin inscription indicates that this machine was the work of Antoino de Hondt in 1743. The carillon which it replaced was very ancient, but whether played by man-power or mechanical is unknown. The finest carillons on a large scale in the Continental cities are one at Antwerp, of 65 bells; Malines, 44 bells; Ghent, 48 bells; Tournay, 42 bells; Boulers, 39 bells; and Louvain, 40. England has borrowed the idea of carillon-ringing, but has invented and applied principles that surmount most of the difficulties and drawbacks of the Continental machinery. The principle on which the improvements are effected is the introduction of a revolving cam-wheel beneath each lever which, continually turning, raises the lever the moment the hammer has struck the bell, so that the latter is promptly brought into position again for striking, and the action of the pins on the barrel, instead of being a lifting and letting-off action, is merely a letting off, the whole of the lifting being done by the cam-wheels. As one of the consequences, the same note can be struck rapidly in succession where before it was impossible. There is in the old town of Boston, England, a carillon of forty-four bells which plays twenty-eight tunes; about twenty others are erected in churches and cathedrals in Dublin, Greenfield, Oldham, Worcester, Rochdale, Reading, Leek, Shoreditch, Holworthy, Hampstead, etc. The town hall at Manchester has one of twenty-one bells; and there is also one in the town hall at Bradford. Nearly if not all the carillon machinery in England was invented and built by the firm of Gillet and Bland, of Croydon, and so great have been the improvements under their hands that a machine playing eight bells needs to be only three feet long, two feet wide, and three feet nine inches high. The music-barrel is ten inches in diameter and fourteen inches long; the spikes on the barrel for letting off the heaviest hammers are only one sixteenth of an inch square. When we compare the delicacy of this machinery, which usually stands under a glass case and looks like the magnified works of a music-box, with the prodigious effects it produces, we can not help feeling convinced that the time is at hand when every chime of bells will be fitted with this beautiful apparatus, to the exclusion of amateur or mediocre performers, or coarse machinery.

The Orchestrion. — In outward appearance this resembles a pipe-organ. Instead of a keyboard, or banks of keys, there is a great cylinder, or cylinders, on the principle of the music-box, operated by clock-work. The space above and behind the cylinders is filled with trumpets, horns, clarionets, bassoons, oboes, flutes, piccolos, flageolets, fifes, bugles, hautboys, trombones, cymbals, triangle, and drums, kettle, bass, and snare. The artistic grouping of the various instruments adds greatly to the general appearance of the orchestrion. They radiate upward and outward, the mouth-pieces being hidden in the mechanism, and so having the appearance of a full orchestra, with the living performers hidden from view, the instruments only being visible. The drums usually occupy a position in the upper part of the works, and are played upon by levers operating the drum-sticks. So, also, by a lever attachment one cymbal is struck against its mate; the triangle is struck by a bar of steel. The wind-instruments are supplied by bellows and operated by the cylinder-pegs which open and close valves, and thus act on the pipes. As nearly as can be gathered from the meager historical data afforded, the beginnings of this magnificent instrument are to be found, like many other works of musical genius, in the gloomy depths of the Black Forest. M. Welte, of Voerenbach, in 1833, is said to have built the first. The idea was suggested by the pegs on the carillon-cylinder playing the bells. A substitution of pipes for bells was made, and the success of the venture warranted an advancement. An orchestrion was built which played operatic selections, overtures, etc., in correct time, with crescendos and diminuendos. It immediately attracted attention. As one of the results, M. Devrainville, of Paris, produced an orchestrion consisting solely of flutes, and M. Blessing, an eminent musician in Germany, entered the lists with one built under his supervision, both following the Welte model. The efforts of his rivals incited Welte to renewed exertion. He sought, first, to embody all the instruments of the orchestra; and, second, to secure all their particular characteristic qualities of tone. An instrument was exhibited in 1849, in Carlsruhe, also in Frankfort-on-the-Main, and was received with such satisfaction that an enormous industry was the result. The instrument was run by weights and clock-work. The lower section was devoted to the bellows, of which there were several, all worked by cranks and eccentrics. Above the bellows was the great chest, with its divisions and subdivisions, its holes and valves and levers. Like lines of infantry on parade, the various groups of instruments were skillfully arranged in their appropriate positions. Between them and the bellows was the large pegged cylinder, extending nearly the entire width of the interior.

The cylinders contained a limited number of tunes, and were removable and interchangeable. On account of the space required for the cylinder, which was in itself a somewhat mammoth affair, a departure has recently been made by M. Gally, of New York, in substituting in place of the large cylinder a pneumatic action and a narrow perforated music-sheet. By this introduction is secured not only the opportunity for a more extended scale, but all the possibilities of musical expression. It is said that Madame Adelina Patti had, at her residence in South Wales, a cylinder orchestrion, fourteen feet high, nine feet in length, with a corresponding depth; with it were eighty cylinders, which required an addition to her house, specially built. Each cylinder had from three to five tunes, thus giving


THE ACTION WITH PEGGED CYLINDER.


THE ACTION WITH PERFORATED MUSIC-SHEET.

her a choice from nearly four hundred selections.

The Cuckoo Clock.—This is a child of the Black Forest, produced in the latter part of last century. It is a little clock in which at the time of striking the hours and half-hours, and sometimes the quarters, a door opens, the figure of a bird appears, opens his wings, repeats the notes of a cuckoo's call as many times as required for counting the requisite hour, and disappears. The mechanism consists of two small pipes, generally of wood, one on either side of the interior clock-works. One pipe is slightly longer than the other, thus making the difference in tone. Connected with each is a tiny bellows. When the stroke is to be given, a little wire apparatus suddenly opens the door, pushes out the bird, and at the same time lifts its wings and fills both of the bellows. The pipe of the higher note is then sounded first, immediately followed by the second, thus giving two distinct notes without blending. There is just enough air in the bellows to give the required notes, and, when they are given, all is silent until it is time for the stroke of the next hour. A very pretty conceit is indulged in sometimes by having a quail and cuckoo both. At the hour-stroke, the quail appears and sounds four calls. Immediately on his disappearance, the cuckoo steps out on his balcony and in his usual manner gives the hour. He does not appear except at the beginning of the hour. The quail, with greater interest in the fleeting moments, calls out the first quarter by one cry, the second quarter by two, and the third by three. In the mechanism each bird has its own sound tubes or pipes, and each acts independently of the other.

Bird-Organs.—These are small boxes with a limited number of pipes played by a cylinder set with pins after the manner of a music-box. They play but one note at a time, and are specially designed for the teaching of canaries, bullfinches, etc. They, too, had their birth in the Black Forest. The pipes are of wood, and the cylinders are set with tunes especially suited to the bird to be taught.

The Singing-Bird.—Maillardet invented this. He produced a box about three inches long. When it was put upon a table the lid flew up, and a humming-bird of beautiful plumage started from its nest, fluttered its wings, poised itself, opened its bill, and delighted its hearers with four different kinds of most beautiful warbling. It then darted down into its nest, and the lid closed. The moving power was springs, and the duration of the action was four minutes.

The Mechanical Flute.—In 1736 Vaucanson exhibited before the French *savants* the figure of a man five and a half feet high. It stood on a pedestal four and a half by three and a half feet top-surface. The figure put the flute to his lips, puckered them, felt of the flute-hole with his tongue, and played with his fingers in precisely the same manner as a human being. The audience was puzzled, and became suspicious, especially as the music was of a very high order. That a living performer was concealed was the universal belief until an examination and explanation was given. When it became apparent that the rich tones of the flute playing difficult airs were the result of mechanical action only, the lookers-on became enthusiastic over the ingenuity displayed. There were nine pairs of bellows blown in succession by the rotation of a steel shaft. This in turn was driven by clock-work. Three tubes passed upward through the body and terminated in reservoirs in the trunk; the tongue was movable, and acted as a valve; the motions of the fingers, lips, and tongue were produced by means of a revolving cylinder. There were fifteen levers operating on the barrel-organ principle. Of these, seven controlled the fingers; three were for soft and swell tones; one for opening the lips and one for closing them; one pushed the lips forward and one drew them back, while one pushed the tongue out and stopped the flute. Its list of tunes was limited, but the playing was equal to that of high-grade performers. This was followed in 1741 by Vaucanson's

Flageolet-Player, which was of similar construction, with the addition of a tambourine. One hand was devoted to each instrument. The player was dressed like a dancing shepherd, and his *répertoire* of music embraced about twenty airs. The flageolet had but three holes, and when it is remembered that the human tongue is not capable of giving the requisite articulation to a rapid succession of notes, but generally slurs over one half of them, the ingenuity displayed in the construction of the instrument will be acknowledged when it is learned that it played the most difficult airs with the perfect articulation of the tongue at every note. The music was superior, and Vaucanson became celebrated as a mechanician.

The Trumpeter was the handy-work of Mälzel. It was the figure of a soldier gorgeously arrayed, and playing a number of French and Austrian marches. It was exhibited for many years in Vienna, then fell into the hands of a traveling troupe, where it rapidly deteriorated.

The Clarionet-Player, made by Van Oeckelen in Holland and exhibited in New York in 1860, was an instrument that differed very materially in construction from its predecessors. It was wound up by a clock mechanism, and would move its head and eyes, bow to the audience, put the clarionet to its mouth, and finger off operatic and classical selections with a perfect fury. The list of pieces was quite large, and on the whole they were well rendered.

A Musical Bed.—A Bohemian mechanic built, in 1858, a bed that, as soon as lain upon, began playing airs from Auber, and lulled the occupant to sleep with Æolian sweetness. At the hour set for rising it changed its tactics, and thundered forth one clashing march after another until relieved of the sleeper's weight.

An Organ worked by Sunlight.—In the last decade of the seventeenth century Cornelius van Drebble, in Holland, produced an instrument that in all appearance, both outward and inward, resembled an organ. When it was placed in the sunlight beautiful symphonies were played without the aid of human hands. A shadow thrown across would produce silence in the instrument. Various theories regarding rarefied air, inclosed air, etc., were indulged in, but the truth seemed to be of a scientific nature so profound, that it has only been fully recognized by recent discoveries. It would seem that heat and light combined, and acting on delicate metals and adjustments, were the actuating principles.

The Hand-Organ, called also the barrel-organ, is a cubical box of a size for a man to carry easily, and contains a pegged barrel, bellows, and pipes. The old Puritans called them boxes of whistles — that is, they were all pipes, but many of them might with equal propriety be called boxes of Jew's-harps, being all reeds, or rather vibrating metal tongues. The ordinary street-organ is said to have been first made by a builder named Hicks, about 1800. Many have pipes for the upper notes and metal reeds for the bass. The effect is a succession of hoarse brays as an accompaniment to a soft melody, suggesting the idea of a duet between Titania and Bottom. A difficulty is, that instruments with pipes and reeds are constantly getting out of order. The varying effects of heat and chill, dryness and moisture, acting on the differing materials, prevents their accord. As a result, the machine is gifted with a dolorous howl, and a coin is gladly given to get rid of it. Among some of the Continental nations, Justice, though blind, is not always deaf. In some of the German cities, especially, the police have summary jurisdiction in offenses musical, and are empowered to demand a certificate with which every organ-grinder is bound to be furnished, showing the date of the last tuning of his instrument. If he perpetrate false harmony, and his certificate be run out, he is fined.

The Hand-Barrow Organ and the Horse-Cart Organ are large structures, sometimes vast. and might be mistaken for wild-beast vans. They are crammed with every known mechanical contrivance for the production of ear-stunning noises. The piercing notes of fifes, the squall of clarions, the coarse bray of trumpets, the snort of rugged bassoons, the unremitting rattle of a dozen or more deafening drums, the clang of bells firing in peals, the boom of gongs, the sepulchral groans of a bottomless bass, are a few of the components. The music is like a volcanic eruption, and, in a crowded street, the machines become monster nuisances.

The Apollonicon.—This was the name given to an immense piece of mechanism that attracted attention in the early part of the present century in England. The machine was of mammoth proportions and required six performers. With a floor-space of 20 by 30 feet, and a height of 24, it contained 1,900 pipes. There were five manuals, a principal one comprising a scale of five octaves, with two at either side, each of two octaves, thus giving a key-board of thirteen octaves. The lowest bass note came from a pipe 24 feet long, with a 23-inch aperture, while the highest tone was A in altissimo. The stops numbered 45. In addition to the manual arrangement there were three large straight-lined cylinders, such as were used on the Continent for carillons. Each was two feet in diameter and eight feet long, and each acted on a distinct part of the instrument. To add to the anticipated din, there was a series of spiral lined cylinders for additional tones, as well as tripping movements. In the revolution of the cylinders, they not only furnished wind to the pipes, but regulated the working of the stops, forming, by instantaneous mechanical action, all the necessary combinations for producing the various gradations of power. Its construction was begun in 1812, and continued for five years, with a total cost of forty thousand dollars. The tone of the instrument was fine and the sounds were grand and novel. It gave imitations of the flute, oboe, clarionet, bassoon, trumpet, horn, trombone. and drums. The principal music played was from Mozart and Haydn, but the mechanical action was deprecated because there was no expression, no life, no soul. It was a machine of grand proportions, entirely unworthy the music. Its mechanical powers were daily exhibited for about twenty-three years, when, in 1840, the monstrosity was taken down, and its component parts employed in the construction of other organs.

Pipe-Organs, Reed-Organs, and Pianos.—The inventions and improvements made in this class of instruments, to produce music from them automatically or mechanically, will, on a slight examination, be found to group themselves under seven distinct systems, and may be classified—

1. A board provided with indentations representing the notes of music; these indentations acting upon levers, which in turn operate the keys of a musical instrument. This is known as the Morse invention of 1731.

2. The barrel or cylinder, from which project pins or pegs, after the manner of the music-box. These pins open valves that admit air to the sounding devices as the cylinder rotates. This is the usual construction of the ordinary street-organs and large orchestrions, as well as carillons.

3. A sheet of paper or other material, provided with slots representing the notes of music, the purpose of the slots being for the passage of air to operate directly the reeds or pipes of a musical instrument. To this class belong the instruments of to-day known as musical cabinet, cabinetto, orguinette, autophone, clariona, tournaphone, aurephone, and melodia.

4. A series of small levers or fingers combined with slotted paper—the levers or fingers passing through the apertures to operate directly the valve of an organ, or to strike the notes of a piano or other instrument where the sound is obtained by a blow. To this class may be referred the organista, harmonium, cabinet orguinette, organina, and ariston.

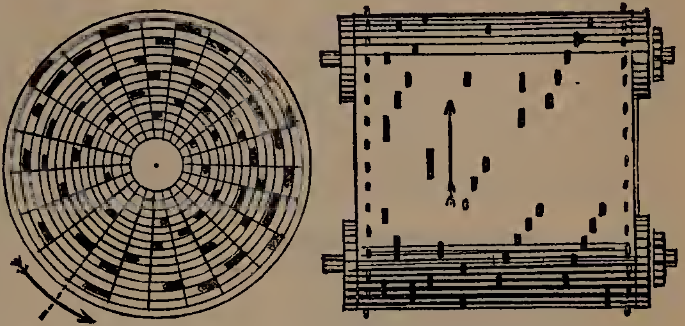
5. A system in which a metallic finger or point is used to pass through the slots in the music-sheet to make an electrical connection for magnetically or pneumatically performing on a musical instrument.

6. The addition to the finger-levers operated by the slots of the music-sheet or tablet, of mechanical connections acting upon the valves of pneumatic apparatus, the pneumatics operating in turn the keys of the instrument. To this class belong the French pianista and the organiste-mécanique.

7. A system employing a narrow music-sheet with either very small perforations or slots, for the passage of air directly operating peculiar sensitive pneumatic motors without the intervention of fingers. It embraces pneumatic apparatus wherein is employed the principle of atmospheric counterpoise, and a system of appliances for obviating mechanical effects, securing expression, and producing artistic music.

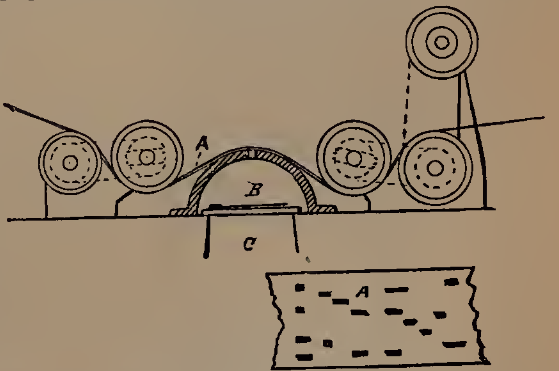
Although inventors and mechanicians have been at work in this department of music for many years, progress has been slow, and comparatively little advance made since the beginning of the present century. Even until within the last decade no instrument of this kind had been made of sufficient merit to attract any considerable amount of public attention, or stimulate such a demand for it as had arisen from the improvements in musical instruments generally. In Germany, France, and England, orchestrions and hand-organs had attained a considerable degree of excellence, but the great weight and size of the cylinders either necessitated a limited range of music or rendered them unfit for any place other than public halls or places of like large dimensions. Inasmuch as there are no patent-laws in Switzerland, and never have been, but all inventions are for the common good, it is extremely difficult to get official or even authentic proofs of the early history of musical mechanics. The famous Swiss watches were worldwide in their celebrity, but the various inventors never enjoyed any royalty under Swiss law. We can trace them, with the cuckoo-clock and bird-organ, the orchestrion, musical birds and boxes, and works of a similar kind, to the Swiss mountains and the Black Forest, but there we must stop.

In 1731 Justinian Morse exhibited in London a pricked or grooved board, representing the different notes of music. His method of operation was by clock-work, together with a jack or winch, acting on levers. The bellows were worked by either the feet or hands. The inventor's desire was to afford a means for producing music especially on the organ for church service. In 1842 Seytre, of France, who is acknowledged to be the pioneer of preparing music on slotted paper, produced an instrument consisting of a square box, on the top of which was a disk of paper, carefully ruled with radii from center to circumference, like the spokes of a wheel. There were also concentric circles intersecting the radii and forming a scale. There could be but one tune to a disk, and it was begun and ended in one turning of the sheet. On the circles in the disk were cut slots differing in length and representing the notes of music. When the disk revolved the slots either acted upon levers for operating the valves of the sounding devices, or served for the passage of air to produce the tone directly. In the latter case the uncut portions of the disk acted as a cut-off.


Music Disk. Music Belt.

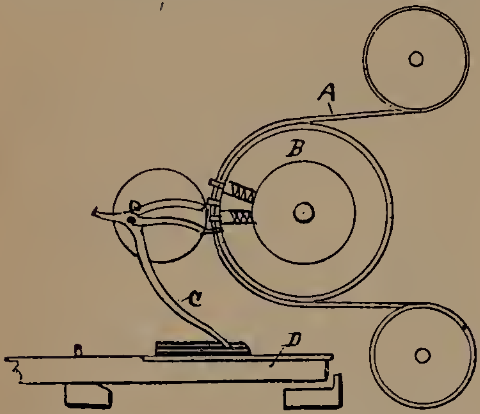
SEYTRE SYSTEM, 1842.

In the specification referring to the Seytre instrument is also shown and described the slotted sheet in the form of an endless belt stretched over two cylinders, one on either side of the music-chest. The belt of slotted paper was drawn forward by means of pegs in the ends of the cylinders, which passed through small holes in the margins of the belt. In 1847 Alexander Bain, of Scotland, obtained a patent for the further application of a sheet of slotted paper or other flexible

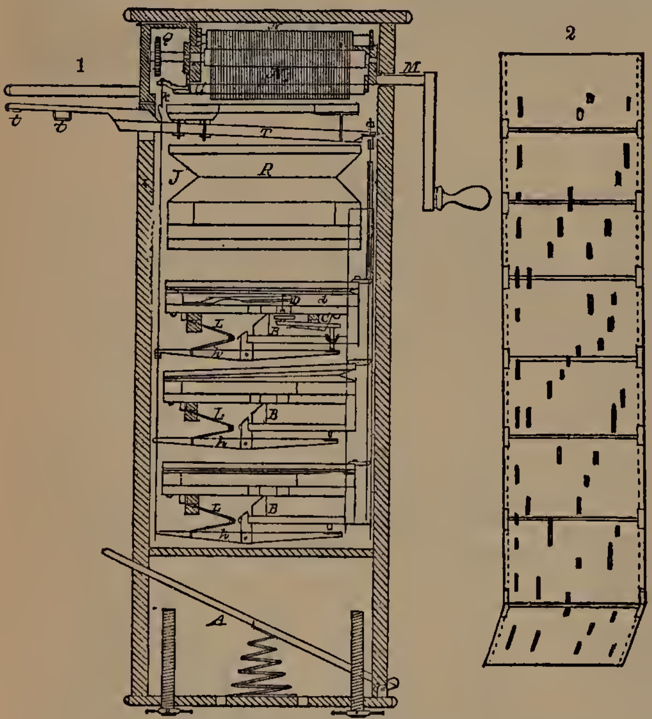


BAIN SYSTEM, 1847.—A, music-sheet; B, reed action; C, air-way.

material applied as a moving valve to reed organs or harmoniums. The paper was drawn over a music-chest having a curved upper surface, in which were the chambers for the reeds. The sound was produced by the air passing through the openings of the paper as it moved across. The sheet was directed in its course over the reed-chest by two pairs of rolls, one on either side of the chest, the sheet being drawn between. This ingenious experimenter was also a pioneer in the application of electrical devices to operate the valves or keys by means of the slotted paper, making and breaking the connections of the circuit. Charles Dawson, of England, in 1848 used a music-sheet similar to those of Seytre and Bain, with the difference that he drew the sheet between the air-chest and the pipes of the organ, the air passing from one to the other, through the slot, to produce the tone. Another step in the steady advancement of the mechanical musical appliances was by Pape, of France, in 1851. His instrument contained two permanent cylinders. The slotted music-sheet passed from one cylinder to the other over a third cylinder, in which were sockets containing movable pins. These pins were thrust out by means of springs acting behind them through the slots, whenever such came in their course. The pins thus followed, in their arrangement and rearrangement on the face of the cylinder, the order of the slots that represented the notes of the music. His system may be best described as a combination of the slotted music-sheet and the pinned barrel. Since the time of these various experiments and discoveries, numerous inventors in Europe and America have taken up the idea and grafted improvements upon it in many directions. Most of the advancements and improvements are, however, the result and growth of either one of two conceptions, to wit, a moving sheet of flexible material, slotted to act (*a*) as a direct valve to sounding devices, as shown in the many styles of orguinettes generally presented to the public; or (*b*) as a means of operating fingers or levers to act on valves. Fourneaux, of France, in 1863 or earlier, produced and exhibited a mechanism for playing the piano and harmonium. It was operated by a slotted music-sheet, or a series of folding tablets. The slots acted upon fingers or levers which were connected by means of wires to the levers of operating valves of a pneumatic action, the pneumatics in turn operating other levers which acted upon the keys of the instrument. In 1867 George Vanduzen used a slotted belt similar to that invented by Seytre in 1842. He applied to this belt finger-levers to operate valves somewhat in the manner of Fourneaux's patent of 1863. The principal difference between him and Fourneaux was in the form of the pneumatics which were operated by the finger-levers and valves.

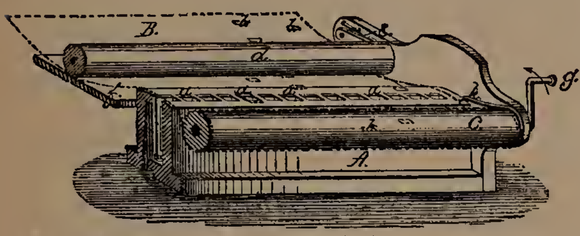


PAPE SYSTEM, 1851.—A, music-sheet; B, pin cylinder; C, operating lever; D, key-board.



FOURNEAUX SYSTEM, 1863.—1, Pianista; 2, music cards.

Until 1876 no great degree of popularity had been enjoyed, or sale attained, by musical instruments of this kind in America, but it would appear that the opportunity afforded skilled mechanics and inventors to gather at the Centennial Exposition and obtain a knowledge of and a comparison with one another's work and ideas, was to become the starting-point of a new era of progress. Among these exhibits was an electric organ made by Henry Schmoele, of Philadelphia; also a French pianiste. One of the peculiarities of the Schmoele mechanism was the use of a music-sheet of double width. The slots for the music, which would ordinarily occupy only one half the entire width of the sheet, but would be very long and therefore liable to destruction, were divided. Half the length of a slot was cut in half of the double sheet and the remainder in the other half. Two sets of electric connections were used, one set beginning the notes and the other set completing them. In the same year Newman R. Marshman, of New York, experimented with paper as a valve, and, with no knowledge of previous attempts in the same line of invention, produced an instrument built on the Bain principle. A similar instrument was patented by E. P. Needham in 1877, but, through the intervention of Mason J. Matthews, of Boston, who championed the cause of Marshman as the real proprietor, all differences were adjusted, and all parties received substantial benefits. The instruments produced became immediately popular. Matthews applied the name of orguinette, a company was formed, and the manufacture was begun. Needham also made instruments. One was called the musical cabinet. It contained thirty-nine notes—a greater number than the orguinette. Matthews followed this with another instrument, the cabinet orguinette, which played more than one set of reeds, and all were popular. In the mean time other inventive minds were at work: Improvements in mechanical appliances, novelty in design, and finish undreamed of in the earlier days of automatic music, were indulged in to a lavish extent. As a result, the common organ or piano has developed into instruments capable of supplying instruction and entertainment to those untrained in the technicalities of the manual key-board, and also affording the skilled and imaginative musician a medium through which he may embody his fancies and luxuriate in harmonies hitherto unattempted.



MARSHMAN-NEEDHAM SYSTEM, 1877.—A, reed-chest; B, music-sheet; *g*, crank; *a*, sound-holes.

The Orguinette consists of a box containing music-chest, bellows, slotted sheet, and rollers. On lifting the lid there is to be seen a sheet of paper thickly perforated with slots ranging from nearly three eighths of an inch square to three eighths of an inch wide, by two, three, or four inches in length. The sheet is guided by rollers. Just under the middle of the paper is the reed-chest, with its series of openings pressed upon by the paper. On the turning of a handle the paper is drawn through. As each aperture in the sheet passes over its allotted reed in the sound-chest, the working bellows exhaust the air through the reed, and the appropriate sound or tone is given. The length of the tone depends entirely on the length of the slot in the paper, and the uncut portion of the paper shuts off the sound from that particular reed. There is a lid, on the principle of the lid used to give the ordinary organ-swell, controlled by the operator's left hand.

ORGUINETTE, 1878.

The Autophone was the work of Henry B. Horton, of Ithaca, N. Y. A music-chest, with its reeds and the paper passing over, was the principal feature. Instead of being drawn over a curved surface, the paper went in a straight line from end to end, and, when its journey was done, it could be fed in again. The sheet was fed by the action of a ratchet operated by the movement of the bellows, which, in the small instrument, were squeezed by the hand; in the larger, by pedal-movement.

The Musical Cabinet of Needham was at first a narrow case about two feet wide and four feet high. Inclosing the bellows and music-chest and stretched over two rollers, one at either end of the interior, was an endless belt of slotted paper. There could be but one tune to a belt, and when it was required to play a new tune, it necessitated the removal of various complex features in the mechanism, the adjustment of a new belt, and restoration of the parts. As a link in the evolution of mechanical music it occupied an important place; but an improvement, suggested soon, caused its manufacture to be abandoned, and a better instrument of the same name, with rolls, was substituted.

The Cabinet Orguinette.—The success of the orguinette paved the way for a larger instrument. One was made of cabinet size, with foot-pedals for producing the wind, and a crank for moving the music-sheet. Finger-levers were employed in connection with the music-sheet for operating the valves. The method employed was a partial reproduction of the Seytre system of 1842, but in many respects a great improvement. The finger-levers were forced through the slots in the paper by means of springs, which overcame oppositely acting valve-springs. This arrangement of levers and springs favored very much the slotted sheet, so that a comparatively thin paper could be used without injury. It also favored the use of larger valves, which could supply wind for more than one set of reeds. In addition to the crank, which was operated by the right hand, was a lever to be controlled by the left. By it the operator of the instrument could produce a swell at pleasure. The action of the instrument was prompt, full, and clear.

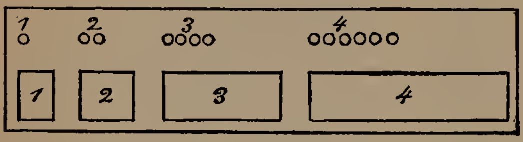
The Bassophone is another name for the *Orgues portative de rue*, of Paris. It is simply a street-organ with the internal construction of slotted paper, instead of the old-time barrel and pegs. It is far superior to the one of older date, and is not so liable to get out of order.

The Organista-Harmonium.—This instrument, in addition to the usual key-board, has an endless band of slotted cards passing over a music-chest in the section above the key-board. The performer is enabled to use the manual with his fingers, and work the automatic part by the pedal-movement. It is a French invention, and is simply a combination enabling the performer to assist the mechanical part at his pleasure. The top of the instrument is readily lifted, but nothing can be seen except the moving of the slotted paper.

The Harmonium à Cylindre et Clavier. — This is an ordinary harmonium, with a music-box cylinder under the key-board. The pegs of the cylinder operate on hooks, which pull the keys down from the under side, while the air is supplied by pedals worked by the feet. The performer can use the key-board at pleasure, but the cylinder is of necessity limited to a small number of tunes.

The Æolian Organ is an instrument that differs from the organista-harmonium principally in substituting the slotted-paper system for the slotted cards. An advantage is that paper rolls are more readily interchangeable. The convenience of both instruments consists in the opportunity of the performer to play his own rendering of the tune in addition to the music as rendered by the prepared sheet.

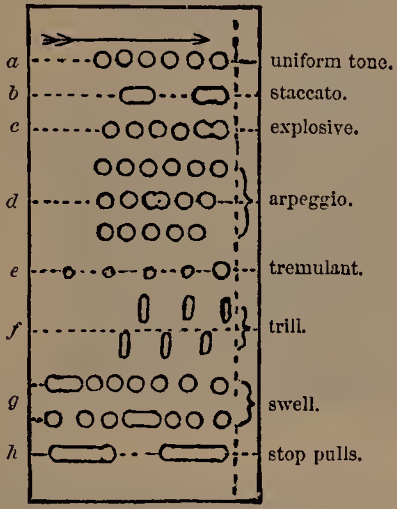
Small Perforations. — The inventions of M. Gally, of New York, in connection with improvements in automatic music, consist of a system reducing the large and cumbrous sheets to the minimum of size and convenience, and substituting an extremely small, round perforation for the large, square-cornered slot. The reduction is in the proportion represented by the following notes, the single round being equal to the short square, and the six group being equal to the long square. The system also includes winding the perforated paper on interchangeable and adjustable spools, and an apparatus for quickly rewinding the sheet, at the end of the tune, on its original spool.



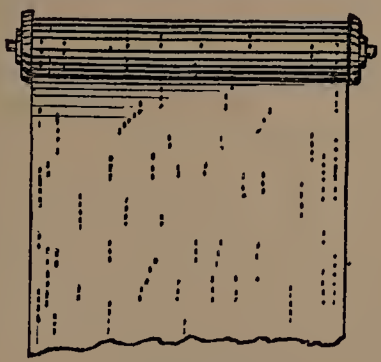
Various differing features in the construction of instruments built on the principle of using a slotted or perforated sheet have given rise to names suited to the fancy of the manufacturer or originator. As a result we have, in addition to those described, the Æolian cabinet, aurophone, cabinetto, celestina, clariona, dulciphone, harmonette, melodia, mandolina, musical casket, musical boudoir-stand, musical table, orchestral cabinet, orchestrina, organina, seraphone, and tournaphone. Some of these names are barely more than trade-marks.

Expression. — True music consists of two parts, sound and soul. Sound is merely the body, expression the soul. It is to be noted that in orchestral music there is greater room for the display of the emotions as delineated by the soul of music than in any other form. As an instance, in a full orchestra the number of instruments is so great, and each possessed of such distinctive peculiarities, that, beginning with any one that suits the pleasure, there can be an accumulated growth of varying combinations that will embrace the whole range of musical thought. The soft flute-note is suggestive of tranquillity; as the ear becomes accustomed to the sound, there floats up a seeming echo, which grows on the senses as the tone of the flageolet is recognized; the almost human voice of the violin expresses the sentiment more vividly. The increase of tone is suggestive of a climax. Another instrument adds its tone, and still another, to the increasing sounds; each additional instrument seems to wake some inhabitant of the air heretofore silent, and he leaps forth to add his quota to the growing chorus; the piercing fife is heard, the piccolo is its rival; clarionets, horns, oboes, bassoons, join the ranks, and the harmonious blending of the sounds, each moment growing mightier, arouses the deepest interest. The ever-increasing wave of sound has summoned new forces; a rattling, as of hail on echoing rocks, is suggestive of the approaching climax; interspersed are the silvery strokes of the triangle; the great drum gives out its boom, and drums, cymbals, trumpets, horns, fifes, and bugles pour out a volume of sound, which, when it can rise no higher, bursts in one harmonious flood and leaves the hearer spell-bound. The whole action, from beginning to end, is under the control of and guided by the *bâton* of the orchestral leader. Such a growth, reaching such a climax, is not possible in any but orchestral music. The organist can get some approach to it, provided, while he plays, a skilled attendant or two can manage the stops; but his instrument does not possess all the capabilities of an orchestra, and he must fall short. The violinist does it on a limited scale. The violin is recognized as possessing in greater degree than any other one instrument the power of portraying the passions. In the hands of a skilled performer it can depict every range of thought and feeling. In the case of the orchestra, which gives us the highest degree of expression, the true musician is not any one or all of the performers on the instruments, but the leader who, by the use of all these many means, produces such musical effects as express his interpretation of the composer's thought and feeling. The measure of his success is the extent to which he leads his audience to grasp the thought of the composer as he himself has interpreted it. We call it expression, and until a very recent period it was a thing almost unknown in automatic music.

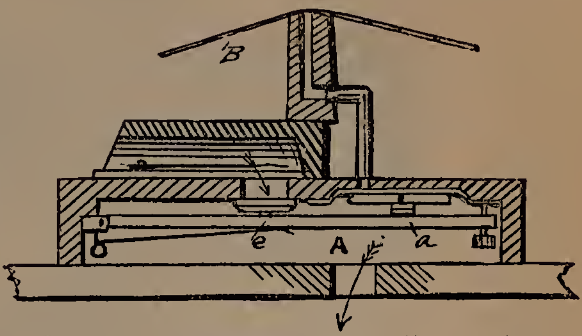
In 1878 Prof. M. Gally took out the first of a series of patents that had for their object the controlling of tones by pneumatic appliances to produce expression. As a result of these improvements, there are, in the music-sheet in which a succession of small perforations produces a continuous tone, eight distinct features in construction, which may be best described as follows: (*a*) A consecutive series of perforations at equal distances the one from the other, their uniformity as to position producing a uniformity of tone. (*b*) A cutting out of the section between the perforations of a short note for producing staccato effects. (*c*) The cutting out of the section between the leading perforations of a longer note for producing explosive effects. (*d*) The elongation of a note or notes less than the addition of a complete perforation by elongating one of the apertures for producing arpeggio chords. (*e*) Following the leading perforation of a note with a succession of perforations of less diameter, thus increasing the width of the uncut sections, for producing tremolo effects. (*f*) Very small perforations elongated transversely for use in trills and cornet-tonguing. (*g*) Lines of perforations in the sheet other than those representing the notes of music, for acting upon the stops, swells, and other expression devices of the instrument.



GALLY SCHEME OF EXPRESSION.



MUSIC ROLL.



ATMOSPHERIC COUNTERPOISE ACTION, 1878–'80.—A, air-chest; B, music sheet; *a*, pneumatic motor; *e*, sounding-valve.

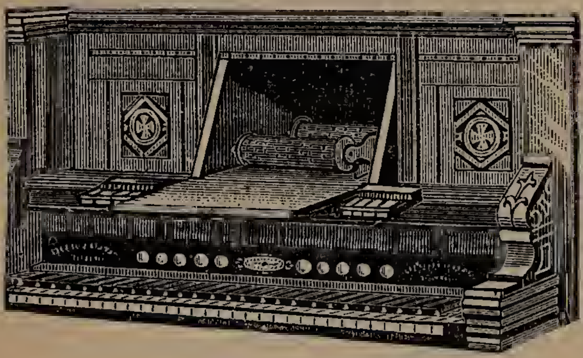
The Orchestrone.—This, invented by M. Gally, is constructed on the principles named in paragraph 7 of the previous classification (p. 615). The operation of the instrument is produced by air in very small quantity passing through the perforations of the music-sheet to act directly upon sensitive pneumatic motors. These motors are exceedingly simple, and have no valves to impede the quickness of their action. In this respect they are a radical departure from other known devices. The rapidity of the pneumatic action permits the performing of every kind of music from the solemn tread of the organ to the most rapid piano trills. The instrument is made in all sizes from that of a mantel-clock to the largest church-organ.

The combination orchestrone, like some of the older French instruments, such as the organista harmonium, the *harmonium à cylindre et clavier*, and the modern Æolian organ, is constructed and arranged to be played either manually or automatically. It has, however, in addition, an ingenious apparatus for producing automatically the expression of the music. This is done directly from the perforated music-sheet, in which not only the notes of the music but also the expression is prepared. This adapts the instrument, when played mechanically, to produce artistic, expressive music even when operated by a person having no musical taste or skill. This instrument is further provided with a device for shutting off the expression from the music-sheet, and a few small expression-keys, which are represented in the illustration Optional Expression on either side of the music-roll chamber, by means of which a person having musical taste but without any acquaintance with the note key-board can give to the music, while the notes are being played automatically, any kind of expression he desires. This is intended to enable a person, by practice on a few simple finger-keys, quickly learned, to become a cultivated and expert musician without the drudgery of learning and manipulating the key-board for the notes. Another peculiarity of this instrument is a motor for the music-sheet, which has in its con-

SULLIVAN-SC.=N.Y.

MANTEL ORCHESTRONE.

struction a metronome governor, by means of which the motor can be set to any exact metronome time, or the time varied at the will of the performer.

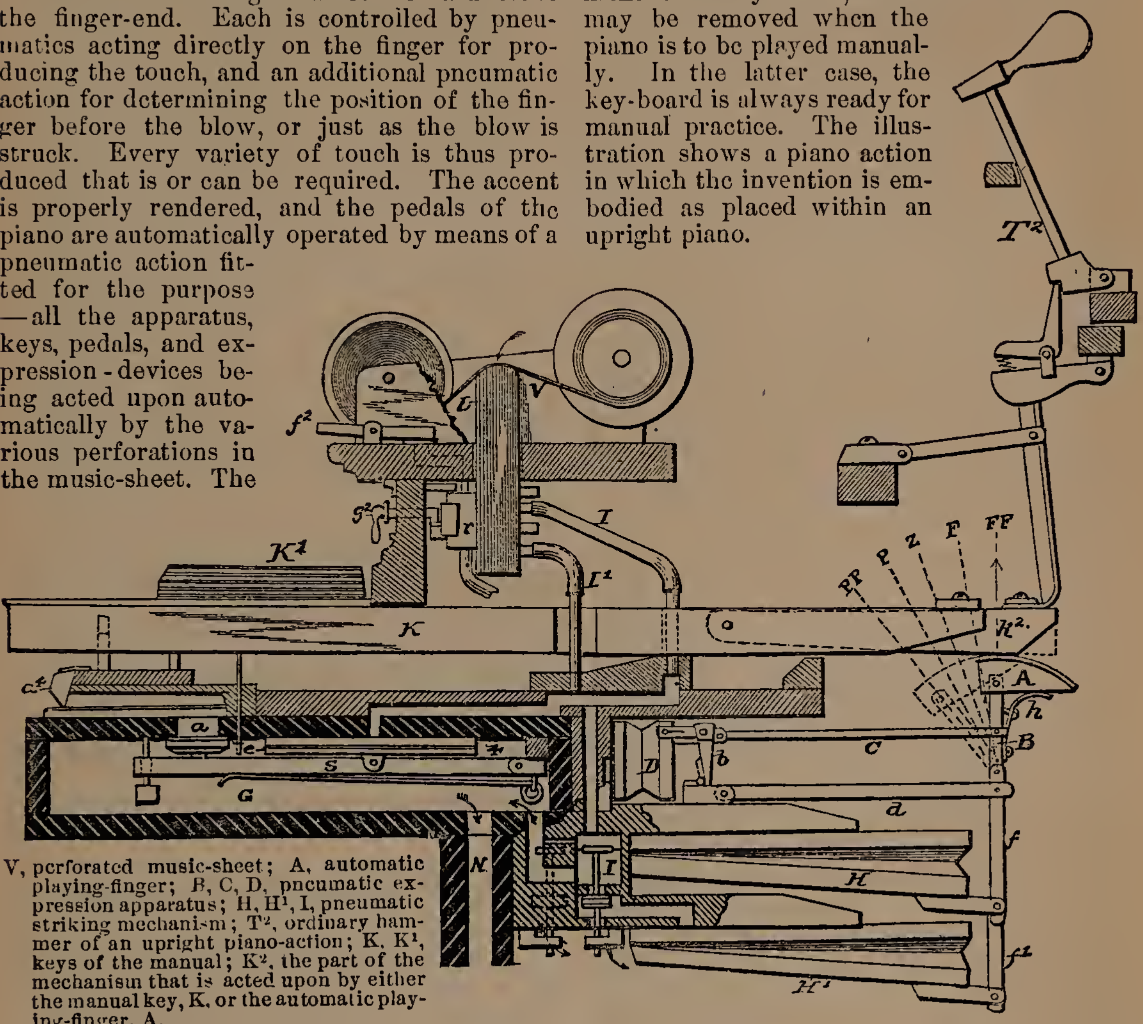


OPTIONAL EXPRESSION.

Mechanical Pianos.—These are usually upright, with the strings struck by little hammers acted upon by a pegged cylinder of music-box construction. When the instrument is new and in good tone, the name is appropriate. When mounted on wheels and out of order, as it is very soon sure to be, it readily degenerates into the common street piano.

The Pianista is an appendage to a piano. Under the name pianista it is a French invention, although it had a predecessor in the form of an automaton. In the earlier part of the century, Maillardet, a Swiss mechanic, exhibited the figure of a lady seated at a piano. By means of skillfully arranged machinery, the lady would bow and look around over her audience, while with heaving bosom she rattled off airs and operas to the number of eighteen from her finger-ends on the piano key-board. The limited action of ten mechanical fingers yielded of necessity to the improvement of a finger for every key, and the pianista was the result. It consisted of a small cabinet case of a length and height sufficient to stand up to any piano key-board. It contained a cylinder and tablets of slotted paper passing in consecutive order over it, each tablet dropping down when finished, to give place to its fellow. The slots acted upon levers, which controlled little hammers extending beyond the cabinet and resting lightly on the keys of the piano. By the turning of the crank and consequent moving of the paper, the keys were played on as by hand. For a mechanical construction it merited praise, but the expression that comes from the touch of a skilled performer, and is the very life and soul of all music, was wanting. There was simply a succession of blows on the keys, and although it was more elegantly constructed, it was but a trifle better than its cousin the street piano. The credit of this invention is given to M. Fourneaux, of France, in letters patent, 1863. In 1852 Gauntlet, of England, exhibited an apparatus whereby the power was applied by electricity, but otherwise the instrument remained unchanged.

The Pianist.—In 1880 M. Gally constructed an instrument which he called the pianist. It is a departure from the French system, in that it secures the needed expression. A series of automatic playing-fingers is constructed, one finger for each key of the piano. The striking portion of the finger, which corresponds to the fingers of the hand of a musician, is hung on a pivot. The surface of the finger is eccentrically curved and is covered with material of varying density, ranging from the softness of the human finger-ball to the hardness of the finger-end. Each is controlled by pneumatics acting directly on the finger for producing the touch, and an additional pneumatic action for determining the position of the finger before the blow, or just as the blow is struck. Every variety of touch is thus produced that is or can be required. The accent is properly rendered, and the pedals of the piano are automatically operated by means of a pneumatic action fitted for the purpose—all the apparatus, keys, pedals, and expression-devices being acted upon automatically by the various perforations in the music-sheet. The invention is applied either to operate directly upon the finger-keys of the piano, or within the piano, forming a part of the action. In the former case the instrument is used as an attachment to the key-board, which may be removed when the piano is to be played manually. In the latter case, the key-board is always ready for manual practice. The illustration shows a piano action in which the invention is embodied as placed within an upright piano.



V, perforated music-sheet; A, automatic playing-finger; B, C, D, pneumatic expression apparatus; H, H^1, I, pneumatic striking mechanism; T^2, ordinary hammer of an upright piano-action; K, K^1, keys of the manual; K^2, the part of the mechanism that is acted upon by either the manual key, K, or the automatic playing-finger, A.

GALLY SYSTEM FOR PIANO, 1878–1880.

The dotted lines show different positions of the playing-finger corresponding to degrees of touch and tone indicated.

N

NATIONAL-BANK TAXATION. A decision was given by the United States Supreme Court in March, 1885, which has an important bearing on State taxation of national-bank shares. The Court held that the taxation of such shares by State authority is illegal when other moneyed capital to a material extent is exempt. In the course of the year, syndicates of national banks were formed in New York, Massachusetts, New Jersey, Illinois, and elsewhere, to test the legality of the existing systems or taxing their shares. Should these suits prove successful, the result must be to work very radical changes in the matter of local taxation. The question arises under section 5219 of the Revised Statutes of the United States, which declares that State or local taxation of national-bank shares "shall not be at a greater rate than is assessed upon other moneyed capital in the hands of individual citizens." In Schuylkill County, Pa., while national-bank shares were taxed, the law exempted from county taxation—(1) bonds or certificates of loan issued by any railroal company incorporated by the State; (2) shares of stock in the hands of stockholders of any institution or company of the State which, in its corporate capacity, is liable to pay a tax into the State treasury under the act of 1859; (3) mortgages, judgments, and recognizances of every kind; (4) moneys due or owing upon articles of agreement for the sale of real estate; (5) all loans, however made by corporations, which are taxable for State purposes, when such corporations pay into the State treasury the required tax on such indebtedness. The case of Boyer *vs.* Boyer *et al.* was a suit against the Commissioners of Schuylkill County to restrain them from levying a county tax for the year 1883 on certain shares in the Pennsylvania National Bank. It was claimed that the levy was in violation of that provision of the national banking act above quoted, inasmuch as "other moneyed capital in the hands of individual citizens" of the county was exempt from taxation. The case went on demurrer to the Supreme Court of Pennsylvania, which upheld the levy and dismissed the suit. An appeal was then taken to the United States Supreme Court, which held the taxation illegal and void.

The Pennsylvania Supreme Court based its decision chiefly on the opinion of the Federal Supreme Court in the case of Hepburn *vs.* School Directors, reported in 23 Wallace, 410. "That case," the latter tribunal now says, "is authority for the proposition that a *partial* exemption by a State, for local purposes, of moneyed capital in the hands of individual citizens, does not, of itself, and without reference to the aggregate amount of moneyed capital not so exempted, establish the right to a similar exemption in favor of national-bank shares held by persons within the same jurisdiction. But it is by no means an authority for the broad proposition that national-bank shares may be subjected to local taxation, where a very material part relatively of other moneyed capital in the hands of individual citizens, within the same jurisdiction or taxing district, is exempt from such taxation. Indeed, such an interpretation of the statutes might entirely defeat the purpose that induced Congress to confine State taxation of national-bank shares within the limit of equality with other moneyed capital, for it would enable the States to impose upon capital invested in such shares materially greater burdens than those to which other moneyed capital in individual hands is subjected." The Court then reviewed its recent decisions on this subject, and deduced from them the following:

"(1) That the words 'at a greater rate than is *assessed* upon other moneyed capital in the hands of individual citizens' refer to the entire process of assessment, which, in the case of national-bank shares, includes both their valuation and the rate of percentage on such valuation; consequently, that the act of Congress is violated if, in connection with a fixed percentage applicable to the valuation alike of national-bank shares and of other moneyed investments or capital, the State law establishes or permits a mode of assessment by which such shares are valued higher in proportion to their real value than is other moneyed capital.

"(2) That a State law which permits individual citizens to deduct their just debts from the valuation of their personal property of every kind, other than national-bank shares, or which permits the tax-payer to deduct from the sum of his credits money at interest or other demands to the extent of his *bona fide* indebtedness, leaving the remainder to be taxed, while it denies the same right of deduction from the cash value of bank-shares, operates to tax the latter at a greater rate than other moneyed capital.

"These decisions show that in whatever form the question has arisen, this Court has steadily kept in view the intention of Congress not to permit any substantial discrimination in favor of moneyed capital in the hands of individual citizens as against capital invested in the shares of national banks."

The act of Congress does not fix a definite limit as to percentage of value beyond which the States may not tax national-bank shares. The Supreme Court admits that "exact uniformity or equality of taxation can not, in the nature of things, be expected or attained under any system." It concedes that there may be a *partial* exemption of other moneyed capital without conflicting with the act of Congress. What the law requires is substantial equality; what it prohibits is discrimination to a material extent against national-bank shares. Whether in any given case the discrimination is sufficiently great to make the taxation illegal, is a question to be determined by the courts. "Cases will arise," says the Court, "in which it will be difficult to determine whether the exemption of a particular part of moneyed capital in individual hands is so serious or material as to infringe the rule of substantial equality. But when the inequality is so palpable as to show that the discrimination against capital invested in national-bank shares is serious, the courts have no discretion but to interfere."

NEBRASKA. State Government.—The following were the State officers during the year: James W. Dawes, Republican, Governor; H. H. Shedd, Lieutenant-Governor; E. P. Roggen, Secretary of State; Charles H. Willard, Treasurer; H. A. Babcock, Auditor of Public Accounts; Joseph Scott, Commissioner of Public Lands and Buildings; William Lees, Attorney-General; W. W. W. Jones, Superintendent of Public Instruction. Supreme Court: Chief-Justice, Amasa Cobb; Associate Justices, Samuel Maxwell and M. B. Reese.

Legislative Session.—The Legislature met on the 6th of January and adjourned early in March. Among the results of the session were the following acts:

To protect bee-husbandry from foul brood and other infectious and contagious diseases.

Concerning the cure of and to prevent the spread of contagious and infectious diseases among domestic animals; to provide for the appointment of a livestock sanitary commission, and State veterinary surgeon.

To prevent the spread of hog-cholera and other kindred diseases, and to prevent traffic in animals dying from infectious or other diseases.

To provide for taking a census.

To prevent the fraudulent removal out of the county of mortgaged personal property.

To provide for viaducts, bridges, and tunnels in certain cases in cities of the first class.

To regulate the admission of foreign surety companies to do business in the State.

To authorize incorporation of detective associations, and to regulate their management.

Creating the county of Blaine.

Creating Logan County.

Creating Dawes County from Sioux County.

Defining the boundaries of Sheridan County.

To provide for the protection of land or other property from high water in certain cases.

To provide for the burial of honorably discharged soldiers and sailors.

To provide for the election of county attorneys.

To provide for the election of registers of deeds.

To provide for the discontinuance of township organization in any county, etc.

Dividing the State into ten judicial districts.

To prevent the marriage of divorced persons during the time allowed for proceedings to reverse the decree of divorce, etc.

To establish an asylum home for the feeble-minded near Beatrice.

To establish, locate, and maintain a hospital for the insane near Norfolk.

To provide for canceling insurance policies.

A mechanics' lien law.

To regulate railroad corporations in their transportation of passengers and baggage, and to fix a maximum rate of charge.

Constituting the Attorney-General, Secretary of State, and Auditor of Public Accounts a Board of Railroad Commissioners, and defining their duties as such.

Providing for two new buildings and a workshop at the State Reform School for Juvenile Offenders at Kearney.

To provide for criminal liability and punishment of owners of personal property, who remove the same, or fail to list the same to avoid taxation.

To prohibit the obstructing of roads and bridges.

To prevent the digging of ditches or trenches within less than fifteen feet of the center of public highways.

Relating to the study of physiology and hygiene in the public schools.

To provide for the erection of a building for the industrial and scientific departments of the State University.

To provide for the sale and leasing of the saline lands, and the development of the saline interests of the State.

A civil-rights act.

Prohibiting selling, giving, or furnishing tobacco to minors.

To provide for the prosecution of offenses on information, and to dispense with grand juries, except by order of the district judges.

To appropriate money for the erection of new buildings for the Home for the Friendless.

Expenses.—The operating expenses of the State government to March 31, 1887, were estimated, at the beginning of 1885, at $1,166,403.60, viz.: Legislative, $75,000; Governor, $10,700; Secretary of State, $17,575; Adjutant-General, $11,200; Auditor, $18,500; Treasurer, $12.750; Superintendent of Public Instruction, $15,800; Attorney-General, $6,300; Land Commissioner, $19,800; Board of Public Lands and Buildings, $23,400; Board of Educational Lands and Funds, $25,833.34; Supreme Court, $32,310; State Library, $5,200; District Courts, $118,924.66; University, $140,000; Normal School, $31,250; Blind Institute, $20,050; Deaf and Dumb Institute, $83,200; Insane Hospital, $149,000; Penitentiary, $102,710.60; Reform School, $80,050.

Population.—The growth of the State has been very great in the past five years. The following table gives the population by counties, according to the State census of 1885 and the United States census of 1880:

COUNTIES.	1885.	1880.
Adams	18,004	10,295
Antelope	9,463	3,953
Blaine	275	. .
Boone	7,645	4,170
Blackbird *	....	109
Browu	6,689	....
Buffalo	14,543	7,531
Butler	13,314	9,194
Burt	10,437	6,937
Cass	20,705	16,683
Chase	170	70
Cedar	4,948	2,899
Cheyenne	1,653	1,558
Cherry	2,619	....
Clay	14,201	11,294
Colfax	9,260	6,588
Cuming	10,170	5,569
Custer	12,399	2.211
Dakota	4,507	3,213
Dawes	2,516	....
Dawson	6,710	2,909
Dixon	6,990	4,177
Dodge	15,499	11,263
Douglas	72,658	37,645
Dundy	432	37
Fillmore	13.452	10.204
Franklin	6,588	5,465
Frontier	4,107	934
Furnas	7,063	6,407
Gage	26,164	13,164
Garfield	1,187	....
Gosper	3,839	1,673
Greeley	3,536	1,461
Hall	13,130	8.572
Hamilton	12,065	8,267
Harlan	7,150	6,086
Hayes	668	119
Hitchcock	2,388	1,012
Holt	16,065	3,287
Howard	7,129	4,391
Jefferson	11,893	8,096
Johnson	10,089	7,595
Kearney	7,787	4,072
Keya Paha	4,313	...
Keith	1,140	194
Knox	7.279	3,666
Lancaster	39,719	28,090
Lincoln	5,002	3,632
Logan	456	....
Loup	976	....
Madison	9,871	5.589
Merrick	7,223	5,341
Nance	3,829	1,212
Nemaha	13,134	10,451
Nuckolls	7,953	4,235
Otoe	19,366	15,727
Pawnee	9,802	6.920
Phelps	6,073	2,447
Pierce	3,369	1,202
Platte	12,590	9,511
Polk	9,805	6,846
Richardson	18,688	15,031
Red Willow	6,192	3,044
Saline	19,760	14,491
Sarpy	5.867	4,481
Saunders	20,427	15,810
Sioux	279	699
Seward	15,225	11,147
Sherman	4,916	2,061
Sheridan	2,916	....
Stanton	8,460	1,813
Thayer	10,880	6.113
Valley	5,885	2,324
Washington	11,855	8,631
Wayne	8,584	813
Webster	10,221	7,104
Wheeler	1,301	644
York	15,082	11,170
Unorganized (estimated)	2,750	2,913
Total	740,645	452,402

* Attached to districts as for judicial purposes.

The total population in 1875 was 247,280; 1870, 122,993; 1860, 28,841; 1855, 4,494.

The following are the principal cities, with their population in 1885:

CITIES.	Population.	CITIES	Population.
Hastings	7,980	Nebraska City	5,597
Kearney	3,601	Columbus	2,573
Plattsmouth	5,796	Falls City	2,070
Fremont	4,014	Crete	2,258
Omaha	61,835	Wahoo	2,059
Beatrice	5,211	Seward	2,032
Grand Island	5,040	Blair	2,132
Lincoln	20,004	York	2,085
North Platte	2,540		

The population of Omaha in 1880 was 30,518; of Lincoln, 13,003.

Election.—On the 3d of November a Justice of the Supreme Court and two Regents of the State University were chosen. The Republican candidates, Chief-Justice Amasa Cobb, and for Regents, C. H. Gere and Leavitt Burnham, were elected. The vote for Judge was as follows: Republican, 72,818; Democratic, 49,389; Prohibition, 4,445; scattering, 137; total, 126,789.

Agriculture.—The crop-yield of 1884 is given as follows: Corn, 169,000,000 bushels; wheat, 48,000,000; oats, 31,000,000; barley, 18,000,000; rye, 20,000,000; millet, 100,000; Hungarian, 25,000; flax, 250,000.

Since the first settlements, in 1854, there have been planted with forest-trees, in Nebraska, 244,356 acres, or 605,514,168 trees, all of which are in a prosperous condition.

The orchards in the State show 12,033,112 fruit-trees, and 2,906,734 grape-vines. Nebraska shipped in 1884 over 300,000 bushels of apples, and grapes by the hundred tons.

There are now in the State—horses, 432,335; cattle, 1,814,642; hogs, 1,958,226; sheep, 1,214,065; mules and asses, 65,234. These are valued at $78,324,604.

Liquor Laws.—A system of high licenses prevails in the State. Treating in saloons and other public places is unlawful. The license law was the past summer declared constitutional by the State Supreme Court, in an action by a St. Louis liquor firm against D L. McGueken, of Omaha, to whom they had sold liquors without license. The case has been carried to the Supreme Court of the United States.

NETHERLANDS, THE, a constitutional monarchy in western Europe. The Constitution, proclaimed Nov. 3, 1848, vests the legislative authority in the States-General, composed of two chambers. The upper consists of 39 members, chosen by the provincial councils from among the highest class of tax-payers; the lower, of 86 members, is elected by citizens paying from 20 to 160 guilders of direct taxes.

The Government.—The reigning King is William III, born Feb. 19, 1817, who succeeded his father, William II, March 17, 1849. The ministry is composed of the following members: Minister of Foreign Affairs, A. P. G. van Karnbeek, appointed Oct. 28, 1885; Minister of the Interior, Dr. J. Heemskerk Az; Minister of Justice, Dr. Baron M. W. du Tour van Bellinchave; Minister of Finance, J. C. Bloem; Minister of the Colonies, J. P. Sprenger van Eyk; Minister of the Waterstaat, Commerce, and Industry, J. G. van den Bergh; Minister of War, Maj.-Gen. A. W. P. Weitzel; Minister of Marine, Capt. W. L. A. Gericke.

Area and Population.—The area of the Netherlands is 12,648 square miles, or 32,999 square kilometres. The population at the end of 1884 was 4.278,272, of which number 2,117,513 were males and 2,160,759 females. There were 2.469,814 Protestants, 1,439,137 Catholics, 81,693 Israelites, and 22,049 of other creeds in 1879.

Commerce.—The total value of imports in 1883 was 1,072,474,000 guilders; of exports, 684,409,000, inclusive of precious metals but not of re-exports. Of the special imports, Germany furnished 301,653,000 guilders; Great Britain, 258,302,000; Belgium, 141,409,000; Russia, 89,801,000; and the whole of Europe, 875,780,000. Of the exports, Germany took 319,363,000 guilders; Great Britain, 132,227,000; Belgium, 114,542,000; and the whole of Europe, 624,361,000. The imports from the Dutch colonial possessions amounted to 81,182,000 guilders; the exports to the colonies were 38,362,000 guilders in amount. The value of the imports from the United States was 60,960,000 guilders; of the exports to the United States, 19,891,000 guilders.

Navigation.—The sailing-vessels that entered Dutch ports in 1884 were 2,788 in number, of the aggregate burden of 2,155,936 cubic metres; with cargoes, 2,600 vessels, of 2,091,288 cubic metres; the number that cleared was 2,788, of 2,155,936 cubic metres capacity; with cargoes, 1,266 vessels, of 740,080 cubic metres capacity. The number of steamers that entered with cargoes was 5,478; capacity, 9.515,750 cubic metres; the total number that entered was 5,605; capacity, 9,695,800 cubic metres; the total number that cleared, 5,543; capacity, 9,675,164 cubic metres; cleared with cargoes, 3,638 steamers; capacity, 5,835,287 cubic metres. The sailing-vessels entered under the Dutch flag numbered 1,047; capacity, 691,349 cubic metres; the steamers 1,195; capacity, 2,547,918 cubic metres.

Railroads, Posts, and Telegraphs.—There were in operation on Jan. 1, 1884, 2,189 kilometres of railroads, of which 1,230 kilometres belonged to the state.

The number of domestic letters forwarded in 1884 was 48,931,340; foreign letters, 14,464,080; post-cards, 21,126,950; journals, 47,275,573. The receipts of the post-office were 5,160,557 guilders; the expenses, 3,896,185.

The length of the state telegraph lines on Jan. 1, 1885, was 4,541 kilometres; of wires, 16,509 kilometres. The number of messages in 1884 was 3,350,818, of which 1,297,869 were international, and 29,949 official. The receipts were 1,041,510 guilders; the expenses, 1,636,779 guilders, not including 149,347 guilders of extraordinary expenditure.

Social Democratic Demonstrations.—At the time of the opening of the States-General in September, the Socialists set on foot a series of manifestations in favor of universal suffrage and of legislation in the interest of workingmen, who have suffered of late from want of employment. The Socialists were excited over repressive proceedings to which the authorities had lately resorted. In August several Socialists were arrested in their homes in Amsterdam and the Hague. A Socialist, named Van Ommeren, was condemned to imprisonment for one year for posting placards insulting to the King, and a riot occurred in consequence at Amsterdam, during which many persons were injured.

Colonies.—The total area of the Dutch East Indies is estimated at 655,000 square miles, and the population at the end of 1882 was computed to be 27,883,895. Java and Madura have an area of 131,733 square kilometres, with a population in 1881 of 20,088,613 persons, of whom 19,834,584 were natives. The number of Europeans in Dutch India in 1882 was 43,738, of whom 35,535 were in Java and Madura. Batavia, the political capital, had 96,989 inhabitants in 1882; Samarang, 65,815; Soerabaya, 121,047.

The commerce of the Dutch East Indies in 1883 amounted to 138,621,000 guilders of merchandise imports, of which 8,002,000 guilders were on state account, and 201,854,000 guilders of merchandise exports, of which 50,721,000 guilders were on account of the Government. The imports of specie were 7,328,000; the exports 760,000 guilders. The Government exports of coffee were 47,213,000 guilders in value, the private exports 35,226,000 guilders; the Government exports of tin, 3,386,000 guilders; the private exports, 3,039,000 guilders; the exports of sugar were 60,244,000 guilders; of indigo, 3,617,000 guilders; of skins, 2,535,000 guilders; of cloves and nutmegs, 2,014,000 guilders; of rice, 1,005,000 guilders; of tobacco, 12,802,000 guilders; of tea, 1,875,000 guilders; of gambier, 2,443,000 guilders; of gutta-percha, 3,625,000 guilders; of gum, 4,704,000 guilders; of pepper, 2,608,000 guilders; of rattan, 2,353,000 guilders.

The crop of Sumatra tobacco in 1882 was 102,050 bales, having increased steadily from 29,030 in 1876. The price per pound in 1882 was 49¾ cents, and the total value of the crop, $8,566,000. In 1883 the yield fell off to 93,503 bales, which sold at 48 cents, and realized $7,620,000. In 1884 the acreage was largely increased, and the yield was prolific, the total quantity being estimated at from 125,000 to 130,000 bales, but the quality was not satisfactory. The fall in the price of sugar of 40 per cent., with a decline in the prices of some other colonial products, very nearly produced a financial crash in Holland, and a crisis in the East India trade in the beginning of 1885. The planters, to whom the banks have freely advanced money to extend their operations, were many of them unable to meet their bills drawn at six months against the banks, especially those engaged in sugar cultivation. Stock-speculators seized the opportunity to manipulate the market so that a heavy fall in bank-stocks occurred, and depositors in great numbers withdrew their balances. The Colonial Bank temporarily stopped payments, and other institutions were on the point of closing also, when leading capitalists united to raise 25,000,000 florins of additional capital with which the banks connected with the colonial trade could conduct the fluctuating business in drafts.

In the beginning of 1885 there were in Java, open to traffic, 938 kilometres of railroads, and under construction 194 kilometres. The receipts of the Dutch India Railway Company in 1883 were 3,856,056 guilders; the expenses, 1,315,958 guilders; the receipts from the state lines, 2,898,052 guilders; expenses, 1,315,749.

The length of the state telegraph lines in 1883 was 5,762 kilometres; length of wires, 7,423 kilometres, of which 5,376 kilometres were in Java and 2,047 in Sumatra.

The Dutch West Indies embrace the colony of Surinam, or Dutch Guiana, and Curaçoa, or the Dutch Antilles. See West Indies, Dutch.

The War in Acheen.—After the failure of Gen. Köhler's expedition, the Government sent the experienced Gen. Van Swieten against the Acheenese. With relatively small losses he captured their stronghold, Kraton, and intended to fortify the position and bring the country into submission by pacific means rather than by force of arms. Gen. Van der Heyden, who came next, attempted to subdue the barbarians by vigorous operations, but was recalled in the midst of his successes. The Governor-General decreed that the state of war was over and tranquillity restored. A civil Governor, Pruis van der Hoeven, was then sent to Acheen, and an unprofitable state of friction between the civil and military authorities resulted. The rebels were emboldened by the transfer of authority, and soon drove in the outposts. The military were rendered powerless by the edict that required them to obtain permission to march against the enemy from the Governor. The blockade of the coast was only partly effective, because the English and Americans engaged in the pepper-trade needed only to prove that they had made advances on the crop, to be allowed to pass the lines. The rebels were supplied with arms and ammunition by the English in Penang. The authority of the Government was weakened in other parts of Sumatra, and other tribes were inclined to throw off their allegiance. The administrative power was then restored to the military commander, but the continuance of the official state of peace hindered Laging Tobias and his successor Col. Demmeni from taking effective measures, though the rebels, inspired by religious fanaticism and re-enforced from various parts of the Malaysian Archipelago, inflicted severe losses on the Government troops. In

August the Government declared the coasting trade of Acheen and the east coast of Sumatra free for English vessels. In the spring the officers of the "Nisero," recently delivered from captivity in Acheen, were tried in Holland on the charge of culpable negligence, and were convicted, but sentence was suspended on account of their sufferings. In August the blockading squadron succeeded in stopping an English ship from Penang with a quantity of rifles and cartridges concealed in her cargo.

NEVADA. State Government.—The following were the State officers during the year: Governor, Jewett W. Adams, Democrat; Lieutenant-Governor, Charles E. Laughton; Secretary of State, John M. Dormer; Comptroller, J. F. Halleck; Treasurer, George Tufly; Surveyor-General, C. S. Preble; Superintendent of Public Instruction, C. S. Young; Attorney-General, William H. Davenport; Fish Commissioner, H. G. Parker. Judiciary, Supreme Court: Chief-Justice, C. H. Belknap; Associate Justices, O. R. Leonard and Thomas P. Hawley.

Legislative Session.—The Legislature met on Jan. 5, and adjourned early in March. Among the acts passed were the following:

Appropriating $5,000 for the relief of White Pine County.

To authorize Lander and White Pine counties to issue 6 per cent. bonds for redeeming outstanding 10 per cent. bonds.

To create a legislative fund.

For the protection of jewelers.

Extending the criminal laws to and over the Indians.

Authorizing the appointment of State detectives.

To provide for the better preservation of public roads and highways.

To provide for the proper care of live-stock by transportation companies.

To provide for the preservation of the mining records of the State.

Providing for the adoption of children.

For the licensing of traveling merchants and merchants doing business through soliciting agents.

To prohibit the sale of ardent spirits to Indians.

To provide for the selection and sale of lands that have been or may hereafter be granted by the United States to the State of Nevada.

To provide for the purchase of grounds at Carson City, Nevada, and the erection of a State building to be used for a State printing-office, armory, etc.

To promote the propagation of Bob White quail.

To promote habits of temperance and to prohibit the practice of treating.

To form agricultural districts, to provide for the organization of agricultural associations therein, and for the management and control of the same by the State.

To provide for the management and control of the State Agricultural Society by the State.

Providing for the removal of the State University from Elko to Reno, upon making compensation to Elko County.

John P. Jones, Republican, was re-elected United States Senator. Amendments to the Constitution of the State were proposed, which go to the next Legislature.

Financial.—The receipts into the State treasury for 1884 were as follow: From tax on property, $210,702.62; tax on proceeds of mines, $11,715.71; poll-tax, $10,690.92; sales of lands, $96,618.29; receipts of State Prison, $23,524.03; miscellaneous, $79,817.30; total, $433,068.87. The estimated receipts for State purposes for the years 1885–'86 are $496,788; to the school funds, $280,400. The estimated expenses, for the same two years, of the State government are $430,600; interest on and redemption of State bonds, $100,500; disbursements for schools and investments for school funds, partly included above, $351,000.

On Dec. 31, 1884, the State held in trust for the educational funds, bonds and cash to the amount of $849,293.14, including an irredeemable 5 per cent. State bond of $380,000; accrued interest, $14,440; less $932 outstanding warrants; net aggregate, $862,801.14.

The indebtedness of the State on that date, not reckoning the $380,000 bond, consisted of 4 per cent. bonds held by the educational funds to the amount of $147,000, outstanding warrants amounting to $5,809.37, and $15,380 accrued interest; total, $168,189.37; cash in treasury applicable to payment, $240,216.48. The assessed value of property in 1884 was $26,597,299.03. In 1885 it was $26,247,038.21.

Mines.—The yield of the Comstock mines was as follows for the first nine months of the year:

MINES.	Tons.	Average.	Bullion.
Belcher	27,945	$11 50	$320,589
Con. California and Virginia	38,350	14 55	549,086
Crown Point	46,477	12 08	561,661
Hale and Norcross	323	23 35	7,542
Kentuck	8,863	15 00	132,926
Lady Bryan	338	4 40	1,490
Monte Cristo	1,455	8 36	12,182
Overman	2,515	10 30	25,925
Yellow Jacket	41,266	13 00	533,951
Total	167,533	$12 80	$2,145,352

The product of the Consolidated California and Virginia mines includes that raised under the lease to Senator Jones. The gross yield for each quarter of the year was as follows:

QUARTERS.	Tons.	Average.	Bullion.
First quarter	57,067	$13 77	$785,599
Second quarter	65,835	12 35	813,023
Third quarter	44,681	12 25	546,739
Total	167,533	$12 80	$2,145,352

During the same period the Douglas and Mariposa mills were run on tailings with the following results:

QUARTERS.	Tons.	Average.	Bullion.
First quarter	2.977	$5 36	$15,982
Second quarter	7,615	3 86	29,378
Third quarter	2,200	3 88	8,557
Total	12,792	$4 25	$53,917

It will be noticed that the ore raised from the Comstock mines this year shows a very low average assay, scarcely sufficient to cover the cost of extraction and milling. It is over five years since the Consolidated Virginia mine ceased paying dividends. It is six years since the California mine paid its last dividend. These two bonanza mines gave their stockholders $74,250,000 in dividends, and then stopped.

The total bullion yield of the State for the year ending June 30, 1885, has been estimated at nearly $10,000,000, a gain over the previous year.

Public Institutions.—The sum of $24,617.58 was expended for the State Orphans' Home for the years 1883–'84. The average number of inmates was 48. The amount expended for the transportation, care, and support of the indigent insane was $80,021.32, and for repairs and improvements in and about the asylum, $10,000. The average number of patients was 156. For the support of the State Prison $83,469.87 was expended. The average number of prisoners was 115. For carrying on the manufacture of boots and shoes at the prison $44,582.53 was expended, and the net profit for the two years was $2,152.49. The number of prisoners at the close of 1885 was 137.

Educational.—The number of children between six and eighteen years of age in 1883 was 10,483; in 1884, 9,813. In 1884, 6,810 children attended public schools, and 554 private schools. Value of school property, $223,014.25.

Indians.—There are more than 8,000 Indians scattered through the sage-brush. Comparatively few of them are settled upon the Pyramid reservation. No schools of any kind are provided for them. There is a Federal appropriation of $400,000 for Indian education. These Indians are peaceably disposed, honest, and intelligent. The few children who have attended the public schools have shown themselves ready pupils.

Railroads.—The following shows the mileage of railroads, and the valuation of their property in the State:

LINES.	Mileage.	Valuation.
Central Pacific	450·84	$6,551,618 90
Virginia and Truckee	51·75	946,531 00
Carson and Colorado	192·00	671,382 00
Nevada Central	93·00	429,350 00
Austin City	2·80	20,050 00
Eureka and Palisade	90·00	498,120 00
Ruby Hill	5·00	51,000 00
Nevada and Oregon	28·40	81,800 00
Lake Tahoe Lumber and Flume Company's	4·75	30,560 00
Sierra Nevada Wood and Lumber Company's	....	18,500 00
Eureka and Colorado (unfinished)	6·00	8,600 00
Total	924·54	$9,257,511 90

Grazing.—Wonderful progress has been made in the stock-raising business. The counties of Elko, Humboldt, and Washoe are the favored grazing sections, but there are almost equal attractions in Churchill, Lander, Eureka, Esmeralda, Nye, White Pine, and Lincoln counties. Nevada shipped 40,000 head to California last year, but is now turning her attention eastward. The amount of capital invested in this industry is estimated at $15,000,000. The State land-sales are mostly for grazing. There are 500,000 sheep on the ranges. The average annual increase is 80 per cent. The wool-clip averages six pounds.

NEW BRUNSWICK. See "Annual Cyclopædia" for 1883.

NEW CHURCH. The General Convention of the New Church is composed of 10 associations, 8 societies not connected with associations, and 4 individual members by election. The associations are: The Canada Association, 5 societies; Illinois Association, 12 societies; Maine Association, 5 societies; Maryland Association, 4 societies; Massachusetts Association, 21 societies; Michigan Association, 5 societies; Minnesota Association, 2 societies; New York Association, 12 societies; Ohio Association, 13 societies; and Pennsylvania Association, 12 societies; in all, including the unconnected societies, 99 societies. The ministers of the General Convention include 8 "general pastors," 93 pastors and ministers, and 11 authorized candidates and preachers. The "Directory of the Societies" includes 116 societies in the United States and Canada; 67 in England and Scotland; 1 in Austria; 4 in Denmark; 11 in France; 8 in Germany; 1 in Hungary; 9 in Italy; 2 in Norway; 13 in Sweden; 5 in Switzerland; 12 in Australia; 1 in Trinidad, West Indies; 1 at Graaf Reinet, South Africa; and 1 at Port Louis, Mauritius.

The sixty-fifth annual session of the General Convention of the New Jerusalem of the United States was held in Cincinnati, Ohio, beginning May 28. Thirty-two ministers and forty-six lay delegates were in attendance. The Rev. Chauncey Giles presided. The Treasurer reported upon the receipt and expenditure of $1,420 on account of the general fund; $120 of the Wilkins fund; $3,265 of the Wales fund; $40 of the Richards fund; $4,934 of the Emily S. White fund; and $100 of the Jenkins fund; with an aggregate cash balance of $2,802; and that he had in his hands property of the Convention to the value of $16,802. The New Church Board of Publication reported the amount of the net assets of the establishment to be $6,255. Its income had been $1,471, and its expenditures $3,093, showing a net loss for the year of $1,622. The endowment fund of the New Church Theological School was returned at $25,820; the expenditure account for the year was balanced at $4,475. The school, which is situated in Boston, Mass., had been attended by ten students. A correspondence school had been conducted in connection with the institution for the benefit of ministers who are approaching the New Church and desire assistance in their studies. The theological course of study includes a department of Homiletics; instruction in the "three sacred languages" (Latin, Greek, and Hebrew); theology, in which are especially taught the works of Swedenborg; and Church History. The Committee on Foreign Correspondence reported concerning the movements of the agents of the Church in Italy, where considerable work had been done in translating and publishing Swedenborg's works in Italian; Sweden, where the recognition of the Church by the Government had been secured; and East Prussia, where the New Church doctrines had been preached in German and Polish. The receipts of the Board of Missions had been $2,151. The board reported concerning missionary work in Texas, Canada, East Tennessee, Arkansas, Louisiana, and Georgia, and concerning assistance which it had given to churches and missionaries in foreign countries. The Committee on the Publication of Swedenborg's Manuscripts (in Latin) reported that, with the completion of the plates of the "Apocalypsis Explicata," the fifth volume of which will contain the appended treatises "De Divino Amore" and "De Divina Sapientia," and the so-called posthumous treatise "De Domino," and the sixth volume, the indexes; and of the plates of the "Canones" and "De Nova Hierosolyma," and the indexes to the missing treatise "Sapientia Angelica de Conjugio," all that the Printing and Publishing Company regarded itself as now able to do with the Latin work was brought to a conclusion. Besides these works, the little treatise "De Caritate" and the "Apocalypsis Revelata" had been published some time previously. In reply to a communication suggesting the establishment of a home for aged New Church people, the Convention declared that, in its opinion, the "time had not yet come when such an enterprise could be entered upon with any hope of success."

NEWFOUNDLAND. **The Census.**—The census of 1884 gives the population of Newfoundland and Labrador as 197,589. Of these, 122,259 are Protestants and 75,330 Catholics; 4,211 reside on the Labrador coast, and of these 1,347 are Esquimaux. The population has increased 21·70 per cent. since 1874.

Governor.—Sir John Hawley Glover, Governor of Newfoundland, died in London, on Sept. 30. He was first appointed in 1876, and five years later was made Governor of the Leeward Islands. In 1884 he was again appointed Governor of Newfoundland.

Finances.—The revenue of the colony for 1884 was $1,170,602, being $81,385 less than in 1883; the difference being due to decrease in the imports of flour, pork, tobacco, and tea. There was a surplus of $73,958. The interest on the public debt amounted to $88,286. A 4 per cent. loan of $600,000 for the construction of a dry dock was issued at par.

The Fisheries.—The take of codfish this season approached a fair average, but prices were the lowest obtained for many years, owing to depression in the European fish-markets. The seal-fishery was unusually successful. On the whole, the season was a great improvement on the previous one. A disastrous storm on the coast of Labrador in October made great havoc in the fishing-fleet. The exports of dried codfish for the year ending July 31, 1884, were 1,733,417 quintals, the largest on record. The prices averaged about $4.60 a quintal. The next largest export was in 1874, when 1,609,724 quintals were exported. The seal-fishery of 1884 resulted in a catch of 233,587 seals, one of the worst on record, a fair average being 400,000.

Foreign Relations.—At the expiration of the fishery clauses of the Washington Treaty on July 1, 1885, the United States tariff on fish and oils had to be imposed on imports of those articles from Great Britain and her colonies, including Newfoundland and Canada. The Canadian Government immediately imposed similar duties on imports of fish and oil into Canada, and the tariff operated not only against the United States but against Newfoundland. In Newfoundland this was held to be a great injustice, inasmuch as Canadians enjoy the privilege of fishing in Newfoundland waters. The Legislature therefore passed an act providing for the imposition of special duties upon certain articles imported from countries the fishermen of which have the privilege of taking fish on the coast of Newfoundland and its dependencies, and in which countries duties are or shall hereafter be levied upon fish and the produce of the fisheries exported from this colony. The tariff is as follows: flour, 75 cents a barrel; pork, $1.50 a barrel; butter, 75 cents a 100 pounds; tobacco, $5 a 100 pounds; kerosene, 5 cents a gallon; corn-meal, 52½ cents a barrel. The Canadian exporters brought strong pressure to bear upon the Dominion Government to induce it to come to terms with Newfoundland; but, owing to the pressure of domestic business, it was not until several steamers from Montreal had been prevented from landing their cargoes at St. John's that the Canadian Minister of Customs ordered the duties on Newfoundland fish and oils to be suspended, and the old and satisfactory trade relations between the island and the Dominion were resumed. Sir Ambrose Shea visited Washington, and arranged for trade relations between Newfoundland and the United States to remain unaltered until Congress had the Washington Treaty under consideration. The imports from the United States in 1883 were $2,839,302; the exports only $392,543.

The Anglo-French Commission appointed in 1884 to adjust the claims of France on the west shore of Newfoundland came to an understanding in November, 1885, and an agreement was signed. The treaty under which the island was ceded to England by France reserved to the French fishermen the right to land and dry fish on the west shore. France claims that these privileges belong solely to the French, and until recently claimed sovereign rights on the shore.

Religious Difficulties.—The recent history of Newfoundland is largely made up of struggles between Catholics and Orangemen. The year 1885 opened inauspiciously, the relations between the two factions having been particularly strained since the fatal conflict at Harbor

Grace, on Dec. 26, 1883, when five persons were killed and fifteen wounded. On Jan. 5, 1885, the Redemptorist Fathers of New York, who were holding a mission at Bay Roberts, were besieged in their houses by hundreds of armed Orangemen, and an Orange arch was built near the Roman Catholic church. The United States consul at St. John's called upon the Governor and demanded protection for the American citizens. An extraordinary meeting of the Executive Council was called; a strong detachment of police and her Majesty's corvette "Tenedos" were ordered to Bay Roberts. On the following day the Orangemen raised the siege and hauled down their flags. On Jan. 22 nineteen Catholics, charged at St. John's with the murder of an Orangeman on Dec. 19, 1883, were acquitted; but they were immediately recommitted, charged with the murder at the same time of three other Orangemen. The second trial also resulted in acquittal. The Governor, in his speech on the opening of the Legislature, urged that every effort should be made to allay the anger now prevailing, and the speech was approved by all the members of the Government. Mr. Penry, an Orangeman, moved an amendment to the address in reply, declaring that the deplorable feeling complained of was the result of "the disgraceful failure of justice at the recent trials," and that it was impossible that harmony could be restored until justice had been satisfied. The amendment was opposed by all the Catholic members, and was defeated by a vote of 19 to 11. The Premier, Sir William Whiteway (a Protestant), then moved another amendment, expressing the opinion that it was owing in a great measure to the wide-spread conviction that there had been a failure of justice in the result of the trials. This also was opposed by the Catholic members, and when it was carried by a vote of 18 to 12, the Hon. R. J. Kent, Speaker of the House, and the Hon. J. W. Donnelly, Minister of Customs (Catholics), resigned. A split in the Protestant party followed; the Orangemen, led by their Grand Master, Mr. J. S. Winter, nearly all deserted Sir William Whiteway, who had been Premier since 1878, and demanded the formation of a strong Protestant Government. They were joined by some of the merchants, and the conflict between the two sections of the Protestant party threatened to strengthen immensely the object of their mutual aversion, the Catholic party. As the date of the general elections (Oct. 31) approached, fears of Catholic supremacy brought about a compromise between the two sections of the Protestants. On the eve of the elections the following compromise was arrived at: Sir William Whiteway to resign the premiership, with the understanding that he is to be appointed Chief-Justice when that office becomes vacant, and in the mean time to have a seat in the Legislative Council; Hon. Robert Thorburn to be Premier, and Mr. Winter to be Attorney-General. A redistribution bill introduced by the Whiteway Government divided Newfoundland into thirty-six constituencies. Twenty-two Protestants and fourteen Catholics were elected.

NEW GUINEA. See PAPUA.

NEW HAMPSHIRE. (For statistics of population, area, etc., see "Annual Cyclopædia" for 1884.)

State Government.—(To June, 1887.) Elections occur biennally in November of even years; legislative sessions biennially in June of odd years. Seat of government, Concord, since 1808, where officers may be addressed, except when otherwise given. Governor, June, 1885, to June, 1887, Moody Currier, Republican, Manchester; Ai B. Thompson, Secretary; Isaac W. Hammond, Deputy-Secretary, and editor of State Papers; Solon A. Carter, Treasurer; John B. Clarke (Manchester), Public Printer; Oliver Pillsbury, Insurance Commissioner; William H. Kimball, Librarian; James W. Patterson, Superintendent of Public Instruction; Augustus D. Ayling, Adjutant-General; Irving A. Watson, Secretary of Board of Health; James O. Adams, Secretary of Board of Agriculture; Charles A. Dole, Secretary of Board of Equalization of Taxes; Orrin C. Moore, Edwin B. S. Sanborn, Edward J. Tenney, Railroad Commissioners; Buel C. Carter and George E. Page, Bank Commissioners. Supreme Court: Charles Doe (Dover), Chief-Justice; Isaac W. Smith (Manchester), William H. H. Allen (Claremont), Lewis W. Clark (Manchester), Isaac N. Blodgett (Franklin), Alonzo P. Carpenter (Concord), and George A. Bingham (Littleton), Associates; Mason W. Tappan (Bradford), Attorney-General.

Finances.—Cash on hand, May 31, 1884, and receipts from all sources for the fiscal year, June, 1884, to June, 1885, amounted to $1,336,293.82; disbursements, $1,266,302.35; leaving cash on hand, June 1, 1885, $69,991.47. Debt, June 1, 1884, $3,176,609.20. Net indebtedness, June 1, 1885, $3,023,748.40; decrease of debt for 1884–'85, $152,860.80. State tax authorized by Legislature for 1886 and 1887, each $400,000. Sources of revenue, 1884–'85, State tax, $400,000; railroad-tax, $95,496.35; insurance-tax, $10,081.59; interest, $3,100.47; premium on bonds sold, $3,925; telephone and telegraph tax, $4,420.16; license-fees and miscellaneous, $1,823.66; total, $518,847.23. Expenses, 1884–'85, ordinary, $150,752.04; extraordinary, $21,438.52; interest, $193,795.87; total, $365,986.43. Excess of revenue over expenses, $152,860.80. Chief items of ordinary expense—salaries, $48,562.08; pay of Council, $2,313.60; public printing, $9,726.45; support of indigent and convict insane, $9,438.40; National Guard, $24,997.14; bounty on wild animals, $14,756.10; Fish Commission, $2,411.13; State-House, $2,583.62; Industrial School, $6,000; Board of Agriculture, $1,017.36; New Hampshire Law Reports, $2,100; Board of Health, $1,023.15; Bank Commission, $6,405.49; education of deaf and dumb, $4,296.11; education of blind, $3,400; Normal School, $5,000. Chief items of extraordinary expense—Agricultural College, $2,000; Dartmouth College, $5,000; White Mountain roads, $2,179.45; State Prison improvements, $5,968.25; historian, $1,694.30; indexing records, $1,100; Fish Commissioners, $1,000. The State tax of $400,000 has ceased to be a burden to most of the towns, the credits on account of corporation taxes more than paying the direct tax in a large portion of the towns.

Savings-Banks.—The Bank Commissioners report the condition of one State and sixty-eight savings banks to March 31, 1885. In a year of fluctuation and depression in securities the report shows that deposits have exceeded withdrawals by one and three fourths million of dollars. The deposits in sixty-eight savings-banks amount to $43,827,356.41, a net increase from last report of $1,735,759.86. The surplus is $1,515,443.16, as against $1,553,885.18; and the guarantee fund $1,950,963.45, as against $1,699,043.72. The entire liabilities, which include $21,779.23 miscellaneous indebtedness, amount to $47,315,532.25. There has been a falling off in local mortgage loans, the amount this year being $5,918,222.34, as compared with $6,400,798.17 last year. United States investments and State bonds have become less, while municipal bonds show an increase. Railroad bonds and stocks have decreased, while miscellaneous bonds have increased. Cash on hand is $250,000 more than last year, while the foreclosed real-estate account is about $150,000 less.

Insurance.—Total fire-risks in force in 1884 were—town mutuals, $2,226,008; State mutuals, $6,448,555; in other States and countries, $38,751,383=$47,425,946. Premiums paid foreign companies, $548,980.71; losses returned, $277,867.30. Net receipts to companies, $271,113.41. Percentage of loss to premiums received, 51. Insurance written in 1884 is $5,822,930 less than in 1883. This decrease arises from the transfer to the "Associated Manufacturers' Mutuals," which do not report to the Insurance Department. These mutuals are carrying many risks in this State. It is a favorite and cheap method of insurance to those who are admitted to its privileges. The exorbitant insurance rates demanded have caused much feeling and restiveness toward the companies effecting insurance in the State. Their rules have been very arbitrary, and no encouragement has been given to the insured to carry a portion of the risk, or to decrease said risks by preventive methods. In 1885 the Legislature passed the "valued-policy" law, and all companies outside of the State gave notice that they would cancel all policies held against them Jan. 1, 1886, and withdraw from doing business in the State. The insurance-tax in 1884–'85 was $10,081.58. Life-insurance policies to the number of 2,078 were issued in 1884, covering an amount of $3,326,963. Policies in force, Dec. 31, 1884, 7,479, covering insurance of $12,397,682. Premiums paid in 1884, $323,268.90; death-losses received, $275,974.46. Payments on matured claims are $69,399 less.

Military.—The New Hampshire National Guard, as now organized, is a brigade of twenty-four companies of infantry, one four-gun battery, and one troop of cavalry; 115 commissioned officers and 1,106 enlisted men, well uniformed and equipped. The brigade is well disciplined and drilled, and holds an annual encampment at Concord for six days.

Charities.—The Asylum for Insane had, March 30, 1885, 325 inmates—138 males and 187 females. For a long period there has been a preponderance of females. Fifteen patients were supported by the State, thirty-three by counties, and fifteen by towns. The remainder are dependent upon friends or their own resources. The establishment of county poor-farms has resulted in decreasing the number of town and county patients in the asylum, leaving it mostly to private patients. The county institutions contain nearly as many insane as the asylum, the whole number in the State at all institutions being about six hundred. The number discharged during the past year was forty-two men and forty-four women. Deaths were thirty-six. The State pays for the education of its deaf and dumb, $4,296.11; for its blind, $3,400.

Industrial School.—Number in school April 1, 1884–'85, 196; discharged on expiration of sentence, 19; on probation, 12; honorably discharged, 6. Good health has generally prevailed among the inmates; they have been much interested in their studies, and the year to them seems to have been one of profit. The boys are taught trades, and the girls to do housework.

State Prison.—Number of convicts, 127. Thirty-five persons were committed the past year—the smallest number for twelve years. The earnings for the year were $18,754.24, and the expenses were $20,349.25. Indebtedness of the prison, $1,595. Less insubordination has been manifested by the prisoners than is on record for several years. A tenement-house for the use of married officers has been completed and occupied.

Education.—The number of public schools in 1885 was 2,684; graded schools, 510; town and district high-schools, 51; average length of schools in the year, 19·95 weeks; pupils, boys attending school two weeks or more, 32,593; girls, 31,063; pupils under six years of age, 4,728; between six and sixteen, 55,221; over sixteen, 5,114; average attendance of all the pupils, 45,160; average attendance to each school, 17; whole number of school-children reported to the Commissioner, 72,806; number not absent during year, 7,229; pursuing higher branches, 7,089. Teachers—males, 424; females, 3,062. Average monthly wages of male teachers, including board, $39.21; female teachers, $23.20. School-houses, 2,209; estimated value of land, buildings, and furniture, $2,335,574; value of school apparatus, $53,368. School revenue from all sources, $634,873; total expenditures, $613,200. Increase of school revenue, $4,787; increased expenditure for teaching, $20,369; for supervision, $2,322. Teachers' institutes, organized under the law of 1883, have been held in each of the ten counties in the State, which have been attended by 859 teachers, at an expense of $1,708. Text-books free for the use of pupils are now being furnished in many cities and towns, at an expense less by half than when furnished by parents. Physiology and hygiene relative to alcoholic stimulants and narcotics are now taught in the schools. The Legislature of 1885 enacted several laws having especial bearing upon the interests of education: first, to abolish the system of division of towns into school districts, and to establish the town system of schools, which will go into effect in 1886; to prohibit the sale and circulation of impure and corrrupting literature; to regulate the attendance of teachers upon teachers' institutes; in relation to special school districts and powers of boards of education. There are 41 public schools of a higher grade in the State, employing 43 male and 60 female teachers, with 1,266 male students and 1,609 female students; also, 47 private schools or academies, fitting young men for college courses, under 99 male teachers and 61 female teachers, with 837 male and 154 female students. Of these are the notable schools expressly for boys—St. Paul's, at Concord, and Phillips Academy, at Exeter. They have 24 libraries, containing 21,604 volumes.

NEW JERSEY. State Government.—The following were the State officers during the year: Leon Abbett (Democrat), Governor; Henry C. Kelsey, Secretary of State; John P. Stockton, Attorney-General; John J. Toffey, Treasurer; E. J. Anderson, Comptroller; William S. Stryker, Adjutant-General; Theodore Runyon, Chancellor; Abraham V. Van Fleet and John T. Bird, Vice-Chancellors; Mercer Beasley, Chief-Justice of the Supreme Court; Associate Justices: William J. Magie, David A. Depue, Jonathan Dixon, Manning M. Knapp, Alfred Reed, Edward W. Scudder, Bennet Vansyckel, and Joel Parker; Judges of Court of Errors: John Clement, William Paterson, John McGregor, Hendrick H. Brown, Martin Cole, and Jonathan S. Whitaker; Robert A. Sheppard, Commissioner of Railroad Taxation; Edwin O. Chapman, Superintendent of Public Instruction; James Bishop, Chief of the Bureau of Labor Statistics; Ezra M. Hunt, Secretary of the State Board of Health.

The Court of Errors and Appeals consists of the Chancellor, the Justices of the Supreme Court, and the lay judges above-named.

Legislative Session.—The Legislature met on Jan. 13, and adjourned at the close of April. Among the acts of the session are the following:

To extend the time for completing the Hudson River Tunnel.

Enabling borough governments to raise money to defray current expenses.

To punish persons who send children out to beg, and to protect children from destitution and exposure.

Authorizing the payment of taxes with 7 per cent. interest that fell due previous to 1883; allowing railroad and canal companies to pay their taxes quarterly.

For the more stringent enforcement of the mechanics' lien law.

Making it lawful to sue unincorporated companies.

Providing that land-improvement companies, not located on the line of a railroad, may subscribe for railroad-stock so that the road may run through their lands.

Continuing for five years the annual appropriation for the completion of the State Geological Survey.

Preventing railroads from leasing their road or franchises till they have obtained the Legislature's consent.

Providing that the Board of Managers of Savings-Banks shall elect a committee of three depositors, who shall in no wise be related to the managers, to examine in connection with the Finance Committee the affairs of the bank.

Requiring fish-wardens to enforce the game and gunning laws on the Sabbath.

Providing for the taking of the State census.

Providing that no more than 600 voters shall be in any single election district; when there are more, the district must be divided.

A prohibitory amendment passed the House, but failed in the Senate. The Legislature of 1886 will consist of 13 Republicans and 8 Democrats in the Senate, and 31 Republicans and 29 Democrats in the House.

Finances. — The Legislature, by the act of April 10, 1884, and the act of April 18, 1884, adopted methods by which increased revenue has been secured from corporations, which will forever render a State tax unnecessary under an honest and economical administration of public affairs. The reports of the Comptroller and Treasurer present in detail the financial condition of the State for the fiscal year ending Oct. 31, 1885. During that year the State fund received from sources other than loans and balances on hand, $1,171,814.23.

The disbursements for State account during the same period other than the payment of loans amounted to $1,168,900.46.

The balance to the credit of the State account Oct. 31, 1885, was $81,266.46.

Railroad Taxation.—Under the act of April 10, 1884, the State Board of Assessors taxed ninety-six railroad and canal companies for the year 1885 for State purposes the sum of $964,821.60, and for local purposes $377,486.04, making a total of $1,342,307.64. The railroad and canal companies of the State own one fifth of all the real and personal property in the State.

Sinking Fund.—The Commissioners of the Sinking Fund report that the assets of the fund amount to $903,628.04. Of this amount $342,834.90 is represented by the real estate that the commissioners have been obliged to take in satisfaction of mortgages held thereon.

Schools.—The sum of $2,449,015.61 was expended for public schools during the fiscal year

—an increase of $35,139.51 over the amount expended in the previous year by the State and localities for this purpose. The total amount of the district and city taxes for the building and repairing of school-houses was $568,388.68, showing an increase over the previous year of $43,843.54. The school property of the State is valued at $6,832,926, showing an increase over the valuation of the previous year of $482,119.

The number of children between five and eighteen years of age is 366,317, an increase of 10,256 over the previous year. The number in attendance at the schools during the school year was 222,317, an increase of 5,525.

School for Deaf-Mutes.—The total expenditures for repairs to buildings, furniture, etc., amount to $4,054.79, and for maintenance and other expenses, $26,048.31, making a total of $30,103.10. The number in attendance in the school during the year was 119, of whom 67 were males and 52 females.

Reform School for Boys.—This had 425 inmates during the year ending Oct. 31, 1885. The number remaining at the end of the year was 269, and the average attendance was 277·59, a decrease of 46 in the average attendance. The amount of money received from the State was $46,494.04, and from the sale of farm produce and the labor of the inmates $9,815.20, making a total of $59,686.61. The total expenditures of the institution, including $4,456.67 for the completion of the new granary, was $59,041.73.

Industrial School for Girls.—The number in this institution at the close of the year was thirty-one, an increase of four. The cost of maintenance was $5,968.94, of which amount $5,500 was paid by the State, the balance having been received from the sale of farm products and the work of the inmates, who during the year made 1,397 dozen shirts and earned $440.01.

Morristown Insane Asylum.—At the close of the fiscal year there were 826 inmates in this institution, an increase of 83. The private patients number 153. The total cost of maintenance during the past fiscal year was $203,771.96, an increase of $9,834.37.

Asylum at Trenton.—This had 646 patients under treatment at the close of the year. The cost of maintenance for the past fiscal year was $155,454.50, and the managers had in their hands at the close of the year a balance of $24,866.45.

National Guard.—The National Guard has 284 commissioned officers and 3,253 enlisted men, a total of 3,537: This is an increase of 5 officers and 199 men.

Riparian Commission.—The commissioners report that the result for the year of the sales of lands in fee, and the principal sums named in leases, of leases heretofore made turned into absolute grants, of rental on leases heretofore made, and of interest received, is the sum of $294,288.63. The total amount of absolute grants made since April 1, 1864, is $1,890,570.71. The total amount of the principal sums of leases convertible into grants, made during the same period, is $1,234,341.14, making together the sum of $3,124,911.85.

Agricultural College.—The Agricultural College receives annually from the State $9,960. This sum is derived from a fund established in 1863, which now amounts to $116,000, and is invested in the war bonds of the State.

State Prison.—The average number of convicts during the past year was 863, an increase of 48. The total expenses were $134,651.84, the earnings amounted to $57,541.85, making the cost of the State Prison $77,109.99.

Population.—A State census was taken this year. The following table gives the population by counties, according to this enumeration and the next preceding Federal and State census:

COUNTIES.	1885.	1880.	1875.
Atlantic	22,356	18,704	13,967
Bergen	39,880	36,786	85,516
Burlington	57,558	55,402	53,155
Camden	76,685	62,942	52,994
Cape May	10,744	9,765	8,190
Cumberland	41,982	37,687	35,311
Essex	213,764	189,929	163,812
Gloucester	27,603	25,886	24,486
Hudson	240,342	187,944	163,000
Hunterdon	37,420	38,570	37,473
Mercer	66,785	58,061	49,884
Middlesex	56,180	52,286	48,313
Monmouth	62,324	55,538	48,500
Morris	50,675	50,861	49,019
Ocean	15,586	14,455	13,707
Passaic	83,374	68,860	53,775
Salem	25,373	24,579	22,701
Somerset	27,425	27,162	27,453
Sussex	22,401	23,539	24,010
Union	61,839	55,571	51,758
Warren	37,737	36,589	37,389
Total	1,278,033	1,131,116	1,019,413

Hudson County has over one third of the Irish population of the whole State. Hudson and Essex have nearly two thirds of the German population. There were 210,267 dwelling-houses and 267,394 families.

The following statement gives the population of every municipality in the State having upward of 5,000 inhabitants in 1885:

	Population.		Population.
Jersey City	153,513	Chambersburg	8,542
Newark	152,988	Town of Union	8,393
Paterson	63,273	Passaic	8,326
Camden	52,884	Phillipsburg	8,058
Hoboken	37,721	Atlantic City	7,942
Trenton	34,386	Rabway	6,861
Elizabeth	32,119	Town of Harrison	6,806
New Brunswick	18,258	Burlington	6,653
Orange	15,231	Perth Amboy	6,311
Bayonne	13,080	Gloucester City	5,966
Bridgeton	10,065	Salem	5,516
Plainfield	8,913	Long Branch	5,140
Millville	8,824	Mount Holly	5,006
Morristown	8,760		

In 1880, Jersey City had 120,722 inhabitants; Newark, 136,508; Paterson, 51,031; Camden, 41,659; Hoboken, 30,999; Trenton, 29,910; Elizabeth, 28,229.

NEW MEXICO. **Territorial Government.**—The following were the Territorial officers during the year: Governor, Lionel A. Sheldon, succeeded by Edmund G. Ross; Secretary, Samuel A. Losch, succeeded by George W. Lane; Auditor, Trinidad Alarid; Treasurer, Antonio Ortiz y Salaza; Attorney-General, William Breeden. Supreme Court: Chief-Justice, Samuel B. Axtell, succeeded by William A. Vincent, who was followed by E. V. Long; Associate Justices, Joseph Bell and Stephen F. Wilson, succeeded by W. H. Brinker and William F. Henderson. William B. Fleming was also for a time one of the Associate Justices.

Land Titles.—On this subject the Governor reports as follows:

> While there is good ground for suspicion as to the sufficiency of a considerable portion of land titles, it is yet the fact that the title to much the larger portion of the lands is as perfect and conclusive as can be found anywhere. As a rule, the lands actually occupied are held by an unimpeachable tenure, having been handed down from generation to generation, and showing a regular chain of title by transfer and occupancy for 200 years. The only possible cloud upon this class of titles arises from the ignorance of the holders as to the American system of land tenures, which leads them to suppose that there is no necessity for a public record for their holdings or a formal patent from the Government. There is also a large area of good lands in different sections of the Territory, amounting in the aggregate to many million acres, subject to homestead and pre-emption entry. A large portion of these lands are in mountain valleys fairly watered and timbered, and are the finest in the world for the production of root-crops, small grains, and fruits. The only really serious embarrassment in connection with our land titles is the fact that many large tracts are held on pretended grants from the Spanish and Mexican Governments, while many more that are held on genuine and indisputable titles from those Governments have been enormously magnified by the fraudulent extension of their exterior limits.

Growth.—All but one of the counties in the southern half of the Territory have largely increased in population, while some in the northern half have diminished. The increase in the Territory has been, in round numbers, as shown by the late census, 14,000. Of this the southern counties have made a net gain of 11,600, and the northern counties 2,400.

Irrigation.—In large portions of the Territory water is being developed by boring and sinking wells. On the Jornada del Muerto, a region 90 by 40 miles, hemmed in by almost impassable mountains, known as the "Journey of Death," from the fact that numbers of people and animals have perished from thirst in attempting to traverse it, water is now obtained in abundance at several places, at depths ranging from 20 to 100 feet. On the Staked Plains on the eastern border of the Territory, and also on the San Agustín plains in the west, and on the great plain about the city of Deming in the south, a large number of wells have been sunk and an abundance of water developed.

Indian Raids.—In May and June destructive raids into the Territory were made by renegade bands of Apache Indians, located on the White Mountain or San Carlos Indian reservation in Arizona. During that raid, it is believed, fifty citizens of the Territory were killed, large amounts of property in cattle, horses, and improvements were destroyed, and general development in the southwestern portion of the Territory was stopped. Early in October another raid occurred, in the main by the same bands, in which several persons were killed, with a further destruction of property. The eastern line of the San Carlos reservation is but thirty miles from the west line of New Mexico, inside of which lies a region 150 by 200 miles in extent, constituting the richest mineral and grazing district in the southwest. This district has been devastated by these Indians almost yearly for many years. Large numbers of the Territorial militia have been acting in conjunction with the United States troops in the defense of the settlements.

Education.—The last Legislature enacted a public-school law, which, though imperfect in some essential features, is a step in advance. Public schools are being generally established, and the public attention is being awakened to the importance of education. According to the report of the Commissioner of the Census of 1885, the number of children that attended school within the year was 10,232, while for the census year 1880 the number was 4,755; the number of persons who can not read is now 42,091, while in 1880 it was 52,994.

The University of New Mexico has about 200 students of preparatory and lower grades, and an industrial department for Indians. The university was opened four years ago, and is under Protestant control.

Railroads.—There are now in operation in the Territory 1,109 miles of railroad, constructed within the past five years. The extension of the Atlantic and Pacific from its crossing of the Atchison, Topeka, and Santa Fé at Albuquerque eastward to the Texas boundary, 200 miles, is practically assured during the coming year.

Valuation, etc.—The assessment rolls for 1885, made up on March 1, show $37,500,498 of property assessed for taxation, against $28,422,839 for 1884, an increase of $9,077,659. This property consists in part of 778,271 head of cattle, 36,153 horses, 1,470,824 sheep, and 44,619 other domestic animals. The net gain in farm products since the census of 1880 has been $1,000,000, and the value of manufactures for 1885 is $3,500,000. The wool-clip for the year was 3,376,150 pounds.

Live-Stock.—In 1882 there were fewer than 500,000 head of cattle grazing over the plains and along the valleys of the Pecos, the Rio Grande, the Gilas, the Canadian, and the Cimarron. The subjoined is believed to be a fair estimate of the number and value of the stock now grazing over the ranges of New Mexico:

CLASS.	Number.	Value.
Cattle..................	2,000,000	$30,000,000 00
Sheep......................	3,121,112	3,298,174 00
Horses.....................	75,782	2,054,970 00
Mules	9,494	342,704 00
Goats......................	77,610	82,317 00
Swine.	11,516	45,150 00
Burros.....................	8,180	64,874 00
Total..................	5,303,694	$35,888,179 00

The Territory has a little over 78,000,000 acres of land; 70,000,000 acres are adapted only to pasturage. Fifteen acres on an average will pasture an animal. On this basis there is grass enough for four and two-third million head of cattle.

Penitentiary.—The Territorial Penitentiary, at Santa Fé, was completed during the year, and was immediately opened for the reception of convicts.

Population.—A census was taken by the Territorial authorities during the year. The following table gives the principal results by counties:

COUNTIES.	BORN IN THE UNITED STATES.			FOREIGN-BORN.			Total population.
	In New Mexico.	Other States and Territories.	Total.	In Old Mexico.	Other countries.	Total.	
Bernalillo	17,076	2,292	19,368	45	648	693	20,061
Colfax	2,712	2,198	4,910	11	747	758	5,668
Dona Aña	4,146	1,164	5,310	2,396	215	2.611	7,921
Grant	1,717	3,211	4,928	1,431	1,038	2,469	7,397
Lincoln	2,086	2,432	4,518	20	239	259	4,777
Mora	9,323	489	9,812	8	195	203	10,015
Rio Arriba	10,600	969	11,569	22	173	195	11,764
San Miguel	18,168	2,521	20,689	91	659	746	21,435
Santa Fé	8,654	1,324	9,978	59	418	477	10,455
Sierra	1,268	863	2,131	54	258	307	2.438
Socorro	7,622	3,601	11,223	102	990	1,092	12,315
Taos	9,567	142	9,709	6	60	66	9,775
Valencia	9,163	207	9,375	29	105	124	9,509
Total	102,103	21,413	123,516	4,274	5,740	10,014	133,530

The total includes 127,957 whites, 4,660 Indians, 577 blacks, and 336 Chinese. Of the Indians, 3,540 are in Bernalillo County, 494 in Taos, 352 in Santa Fé, and 145 in Rio Arriba. Of the Chinese, 250 are in Grant County. Population in 1885, 133,530; in 1880, 119,565. The population of the principal towns was as follows: Santa Fé, 5,970; Las Vegas, 5,089; Socorro,* 4,047; Albuquerque,* 3,000; Armijo (old Albuquerque), 1,870; Las Cruces, 2,100; Silver City,* 1,914; Raton, 1,097; Springer, 1,038; Deming, 1,000; Anton Chico, 1,306; Belen, 929; Taos, 1,287; Bernalillo, 1,520; Tierra Amarilla, about 1,100.

NEW YORK (STATE). Meeting of the Legislature.—The annual session of the Legislature began on the 6th of January. There was a warm contest for the Republican candidacy for Speaker of the Assembly, the leading aspirants being George Z. Erwin, of St. Lawrence County, and Walter S. Hubbell, of Monroe. This was somewhat complicated with the contest for the nomination for United States Senator, the supporters of Erwin making common cause with those of Levi P. Morton. Mr. Erwin was nominated by the Republican caucus and was chosen Speaker. Other candidates for the Senate nomination were Frank Hiscock, Leslie W. Russell, and William M. Evarts, but before the caucus was held the first two withdrew, and the opposition to Morton was concentrated in support of Evarts, who, on Jan. 19, received the caucus nomination by a vote of 61 to 28 for Morton, and 3 for Chauncey M. Depew. At the election of Senator on the 21st, Mr. Evarts received 19 votes in the Senate and 73 in the Assembly; and Edward Cooper, the Democratic candidate, received 13 in the Senate and 52 in the Assembly.

Freedom of Worship.—On the first day of the session a bill was introduced in both houses "to provide for the better security of the freedom of religious worship in certain institutions." Its chief purpose was to secure to Roman Catholic priests not only the privilege of visiting and ministering to inmates of institutions for various classes of delinquents and unfortunates, but that of conducting worship therein in accordance with the forms and ceremonies of their Church. It caused much discussion both in and out of the Legislature, and was vigorously opposed by the managers of the Society for the Reformation of Juvenile Delinquents, who had charge of the New York House of Refuge. It finally passed the Senate, with some amendments, on the 1st of April, by a vote of 18 to 10, six Republicans voting in the affirmative and one Democrat in the negative. Final consideration of the subject in the Assembly was delayed from time to time, and no vote had been reached on the passage of the bill when the day of adjournment arrived.

The Census.—The Constitution of the State requires an "enumeration of the inhabitants" to be made, under the direction of the Legislature, in the middle of each decade, to serve as the basis of apportioning representation. In pursuance of this requirement a general law was enacted in 1855 placing the work in charge of the Secretary of State, who was authorized to appoint the necessary enumerators, and providing for the collection of various industrial statistics at the same time. Under this, with certain special provisions in each case when the necessary appropriations were made, three State censuses had been taken. Near the beginning of this session Gov. Hill submitted a special message recommending that the census of 1885 be confined strictly to an enumeration of inhabitants, and that the enumerators in the several counties be appointed by the county clerks under the rules of the Civil-

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* Incorporated.

Service Commission and on competitive examinations. A warm controversy between the Governor and his supporters in the Legislature on the one side, and the Secretary of State and the Republican majority in the Legislature on the other, sprang up on the subject of the census to be provided for and the manner of appointing enumerators. A bill appropriating $40,000, and providing for taking the census in the customary way, was passed, after considerable delay, and vetoed by the Governor. His avowed objections were that such a census was not authorized by the Constitution, was not necessary or desirable, and would be too costly. When the Legislature adjourned no agreement had been reached on the census question, and no new bill had been passed. The Governor immediately called an extra session exclusively for the consideration of this subject. The bill formerly vetoed, with only slight modifications, was again passed and submitted to the Governor, who again vetoed it.

Niagara Falls Reservation.—Early in the session the report of the Commissioners of the Niagara Reservation was submitted. The lands secured comprised Goat, Bath, Bird, Luna, Chapin, and Three Sisters Islands, and the small islands adjacent; the bed of the river between the islands and the shore on the American side, and between Goat Island and the Canadian boundary; a strip of land along the brink of the river from Port Day to Prospect Park, the cliff and debris slope, and the land at the foot of the fall. The general limit of the reservation is the natural ridge following the bend of the river, from 100 to 200 feet from the shore, and it includes all the points from which the falls are visible on the American side. The appraisals of the property taken amounted in the aggregate to $1,433,429.50, and all the awards had been made to former owners, and confirmed by the Supreme Court. A bill for the appropriation of this amount to complete the acquisition was introduced in both houses. This was modified so as to authorize the raising of $1,000,000 of the amount by the issue of 4 per cent. bonds, to be paid in ten equal annual installments, and in that form was passed after much discussion. A supplementary bill gives the commissioners who had selected the lands, and their successors, the authority to complete and manage the park, and provides for the appointment of a superintendent. The formal transfer of the reservation to the State was made on the 16th of July, with appropriate ceremonies. Ordinances for its regulation were subsequently adopted by the commissioners, and Thomas V. Welch was appointed superintendent. The commissioners of the reservation are William Dorsheimer, Andrew H. Green, and J. Hampden Robb, of New York; Sherman S. Rogers, of Buffalo; and Martin B. Anderson, of Rochester.

Gas Companies.—The consolidation of six gas-lighting companies in the city of New York into one, in the latter part of 1884, with an increase of the aggregate share capital from between $15,000,000 and $16,000,000 to $39,000,000, without any new investment, led to the formation of a protective organization under the name of the Gas-Consumers' Association, and a demand for legislation regulating the business and limiting the prices and profits of the Consolidated Company. In response to this, a special committee of the Senate was appointed to investigate the matter. After conducting its inquiry in the city of New York, the committee made a report, March 30, in which it recommended the following remedies:

The establishment of a Board of Lighting Commissioners for the City of New York.

Authority to such board to ascertain and certify the cash capital actually paid in by the bondholders and stockholders, and a limitation of dividend to 10 per cent. on that amount, and the credit of further net earnings to stockholders and consumers.

Authority to such board to supervise the conduct of such companies, and receive and investigate complaints made by consumers.

A reduction of the price of gas to $1.50 per thousand feet, with power in such board to further reduce the price as their circumstances may warrant.

Annual reports of the earnings, disbursements, gas manufactured, sold, and such other facts as will give publicity to the transactions of such companies.

Prohibition against a further increase of capital stock, and limitation upon the power to issue bonds or mortgages.

A fixed standard of the purity and illuminating power of gas, and a careful record of the same, and the pressure employed.

Prohibition against the laying of mains in the streets by companies other than those entitled to do so, without the consent of the Board of Lighting Commissioners and the Legislature.

A bill embodying these recommendations was submitted. It promptly passed the Senate by a vote of 29 to 1, and on the 28th of April was ordered to a third reading in the Assembly by a vote of 105 to 1. On the following day a sudden opposition developed, which was very generally credited to the activity of the agents of the Consolidated Gas Company in the lobby, and charges of a corrupt use of money were freely made. After a warm parliamentary contest the bill was defeated on the 30th of April, the vote on final passage being yeas 52 and nays 64. Another bill, more moderate in its provisions, was passed by the Senate, but failed in the Assembly. A third, still more moderate, was carried through the Assembly on the 12th of May by a sudden and energetic effort of the advocates of legislation on the subject, but was on the same day recalled from the Senate, reconsidered, and killed. The Consumers' Association, at a public meeting in New York, declared that the circumstances under which legislation was defeated were "a disgrace to the Legislature of this State and to managers of gas companies, who pretend to be respectable men and good citizens," and resolved to continue its efforts.

Adirondack Forests.—The Forestry Commission, appointed in 1884 to consider and report on the subject of the preservation of the forests in the Adirondack region and elsewhere, submitted its report, giving detailed information regarding the wild lands owned by the State and those which it was considered expedient to acquire, and recommending a number of measures intended to secure the acquisition and protection of forest lands about the sources of important streams. The subject occupied much time during the session, but the proposed legislation was greatly modified. A bill was finally passed and approved, which provided for a Forestry Commission of three members, appointed by the Governor with the consent of the Senate, who were to serve without compensation, but to have their reasonable expenses paid. They were empowered to appoint a forest warden, inspectors, and other agents, and fix their compensation. The commission has custody of the forest preserves of the State, consisting of lands owned or to be acquired in the counties of Clinton, Essex, Franklin, Fulton, Hamilton, Herkimer, Lewis, Saratoga, St. Lawrence, Warren, Washington, Greene, Ulster, Delaware, and Sullivan. It is to make regulations and enforce them for the protection and renewal of forests. Provision is made for preventing unlawful trespass and the destruction of forest-growth, for punishment of violators of the law, and for adding to the domain, etc.

Prison Labor.—By a bill passed in 1884 the employment of convicts in the State Prisons by contract was prohibited on the expiration of the contracts then in existence. Only employment on public account was then authorized by existing law, and this could only be carried on by means of a considerable investment of capital, which was not provided for. By the expiration or abandonment of contracts, there were before the end of February 950 prisoners at Auburn and Clinton Prisons thrown out of employment. By the use of unexpended balances for maintenance, a part of these were kept at work manufacturing boots and shoes at Auburn and clothing at Clinton on State account. The Superintendent of Prisons, in reply to a request for information from the Senate, said that an appropriation of $730,000 would be required for the fiscal year ending Sept. 30 if the convicts were to be kept employed on State account, and $1,180,000 for the year following. When all the contracts had expired, he said, it would require an appropriation of $2,500,000 to keep the prisoners at work. This would be needed at the outset for the purchase of plant, machinery, and materials, and the cost of management. An appropriation of $500,000 was made to continue the work at Auburn and Clinton for the current year, and then efforts were made to authorize a different plan of employment. It proved to be impossible to come to any agreement on the subject, and nothing was accomplished toward the settlement of the question. No further appropriation was made for the existing system.

Municipal Administration.—A large number of measures were considered which affected the administration of affairs in cities, especially in the city of New York, but none of importance became laws. In consequence of the limitation upon the indebtedness of the latter city effected by amendment of the State Constitution, an attempt was made to modify the law in relation to lands for new parks; but this was defeated. It was also proposed to change the management of the Dock Department and make it dependent on municipal appropriations for support; but this failed. A proposition to change the time of the municipal election in New York to April was defeated in the Senate. Other reform measures met the same fate. A bill changing the management of the East River Bridge, and providing for an extension of the approaches, was vetoed by the Governor, as were bills providing that the Register and County Clerk of Kings County should receive salaries for their services and account to the public for the fees collected. The most important bills affecting cities which actually became laws were one modifying the Building Act for the city of New York, one limiting the height of buildings occupied for residences to 80 feet, one providing for the repavement of Fifth Avenue, one providing for a commission to carry out the requirements of the law in regard to placing telegraph and other electric wires underground, and one providing for a commission to construct a bridge across the Harlem river at 180th Street.

Miscellaneous Proceedings. — An attempt was made to modify the civil-service law, so as to exempt veteran soldiers and sailors from competitive examinations. A bill for this purpose was passed in the Assembly, by a vote of 84 to 24, but was finally defeated in the Senate, many of the veterans having protested against it. The civil code prepared by Mr. David Dudley Field, and intended to put in compact and consistent form all the provisions of the common and statute law relating to civil rights and obligations, occupied much attention in both houses, but was not adopted. A number of important bills were submitted by the Railroad Commissioners, but none of them received attention. A bill was passed, on the recommendation of the State Comptroller, so modifying the corporation tax law as to make the tax apply only to that portion of the capital of a corporation which is employed within the State, instead of its entire capital stock. This was made to apply to taxes already due, provided there had been no litigation for their recovery, with adjudication in favor of the State, and provided, further, that they were paid before August 1, 1885. The appropriation for the continuance of work on the new Capitol was the subject of some contention, especially in the Senate. Finally, $750,000 was appropriated, to be expended under the direction of an advisory commission, consisting of the Governor, the Attorney-General, the President of the Senate, and the Speaker of the Assembly. Provision was also made for the removal of furnaces and boilers from the basement of the Capitol, and the construction of a boiler-house on land to be acquired for the purpose. For this $175,000 was appropriated in a separate bill. This arrangement was carried out during the year. The regular session ended on the 15th of May. On the last day two investigating committees were appointed in the Senate to prosecute inquiries during the recess. One of these was to examine into the circumstances of the consolidation of the gas companies of New York city, and the other to investigate the administration of the various departments of the municipal government. A majority of the acts of the session remained unsigned in the Governor's hands, having reached their final passage in the last ten days. Among the important measures subsequently approved was one imposing a tax of five per cent. on collateral inheritances, and among those vetoed and not already mentioned was one to improve the operation of the Sinking Fund of New York city. Among the items of appropriation bills vetoed were those for continuing the Adirondack and State surveys, and for the general work of the State Board of Health.

Political.—At a meeting held at Saratoga on Aug. 18, the Democratic State Committee decided to have the State Convention of the party held at that place on Sept. 24. The Republican State Committee met at Saratoga one week later, and decided to have the convention of that party held at the same place Sept. 22. The representation in the convention, which had formerly been one delegate for each Assembly district, and one additional for every 1,500 votes, or fraction thereof exceeding 750, cast for the last Republican candidate for President, was increased to one for each district, and one additional for each 1,000 votes, or fraction thereof exceeding 500, cast for the last Presidential candidate. The Republican Convention consisted of 694 delegates, an increase of 197 over that of 1884. On the first ballot for candidate for Governor, Gen. Joseph B. Carr received 205 votes, James D. Warren 137, Ira Davenport 105, L. P. Morton 42, and the remainder were divided between several candidates. On the second day of the convention Mr. Davenport was nominated, receiving 347 votes out of a total of 693, Carr receiving 214, Warren 194, Cornelius N. Bliss 113, and the remainder being divided between six candidates. The nomination was made unanimous by acclamation before the result of the ballot was declared, several delegations having previously changed their vote to Davenport. Gen. Carr was nominated for Lieutenant-Governor without opposition, and the ticket was completed with Anson S. Wood, of Wayne County, for Secretary of State; James W. Wadsworth, of Livingston, for Comptroller; Charles F. Ulrich, of New York, for Treasurer; Edward B. Thomas, of Chenango, for Attorney-General; and William V. Van Rensselaer, of Seneca, for State Engineer and Surveyor.

The most prominent of the candidates for the nomination for Governor in the Democratic Convention was Gov. David B. Hill, who had been credited with active efforts to secure delegates pledged to his support, and who was most zealously urged by that portion of the party which was least in sympathy with civil-service reform. His opponents were regarded as in a special sense friends and supporters of the President's policy, and they agreed upon Abram S. Hewitt, of New York, as their candidate for the nomination. Hill was nominated on the first ballot, receiving 338 votes out of 380, only 33 being cast for Hewitt, 8 for Gen. Henry W. Slocum, and 1 for Roswell P. Flower. The ticket was completed on the second day of the convention, Roswell P. Flower being nominated for Lieutenant-Governor; Frederick Cook, of Monroe County, for Secretary of State; Alfred C. Chapin, of Kings, for Comptroller; Lawrence J. Fitzgerald, of Cortland, for Treasurer; Denis O'Brien, of Jefferson, for Attorney-General; and Elnathan Sweet, of Albany, for State Engineer and Surveyor.

On the day after the convention, Mr. Flower sent a letter to its presiding officer declining to be the candidate for Lieutenant-Governor, assigning no reason except that the position was one for which he had "no inclination," and his nomination was not "necessary to the success of the ticket." The vacancy was filled by the State Committee with the name of Gen. Edward F. Jones, of Binghamton.

A Prohibition Convention was held at Syracuse on the 9th of September, which nominated the following ticket: For Governor, H. Clay Bascom, of Troy; Lieutenant-Governor, W. Jennings Demorest, of New York; Secretary of State, Edward Evans, of Tonawanda; Comptroller, Frederick Sheldon, of Hornellsville; Treasurer, Hiram Vandenburg, of Fulton County; Attorney-General, W. Martin Jones, of Rochester; State Engineer and Surveyor, George A. Dudley, of Ellenville. A Greenback ticket was also put in the field, the candidate for Governor being George O. Jones, of New York.

The National Committee of the "Independents" issued an address "to the Independent voters of New York State," urging the defeat of Gov. Hill and the election of Davenport, as the best means of sustaining the national Administration and the cause of civil-service reform.

At the election, on Nov. 3, the Democratic candidates were chosen. The total vote for Governor was 1,026,239, of which Hill received 501,465, Davenport 490,331, Bascom 30,867, and Jones 2,150. There were 1,446 defective and scattering ballots. Hill's plurality over Davenport was 11,134. The plurality of Jones over Carr for Lieutenant-Governor was 3,156, and that of Cook over Wood for Secretary of State, 14,608. Judges of the Supreme Court were chosen in the first five judicial districts, there being practically no opposition to the re-election of Judges Barrett, Democrat, in the first; Barnard, Democrat, in the second; Ingalls, Democrat, in the third; and Hardin, Republican, in the fifth. In the fourth there was a contest, but Judge Joseph F. Potter, Republican, was elected over Hand, Democrat, by a vote of 52,836 to 37,440. A member of Congress was chosen in the Eighth District to succeed S. S. Cox, who had been appointed Minister to Turkey. The candidates were both Democrats, and Timothy J. Campbell was elected, receiving 11,931 votes to 11,044 for Mr. Galvin, his opponent. The Legislature chosen at the same election consisted of 20 Republicans and 12 Democrats in the Senate, and 78 Republicans and 50 Democrats in the Assembly. This was a gain of one in the Senate and five in the Assembly for the Republicans.

Finances.—The State debt on Sept. 30 was $9,339,160, including $1,000,000 bonds issued for the purchase of the Niagara Falls Reservation, payable in annual installments of $100,000, and excluding the Indian annuity fund, amounting to $122,694.87. The remaining $8,339,160 is the remnant of the canal debt, the last of which matures in 1893. The canal sinking fund amounted to $4,663,188.61, an increase of $600,351.76 in the year preceding. This leaves the total debt unprovided for, $4,798,666.26. The rate of taxation for the fiscal year 1885–'86 is 2·96 mills on the dollar, the total valuation of taxable property being $3,094,731,457. This will yield $9,160,405.11, to be devoted—$3,094,731.46 to school purposes, $1,702,102.30 to maintenance of canals and canal debt, and $4,363,571.35 to general purposes. The receipts from the tax on corporations for 1885 was $1,673,879.09, of which $1,032,466.70 was derived from transportation companies, $238,871.79 from insurance companies, $125,339.54 from telegraph and telephone companies, $244,626.35 from gas, mining, and miscellaneous companies, and $32,574.71 from foreign banks and bankers. There still remains due of the unpaid tax of the Western Union Telegraph Company for 1880 about $132,000, notwithstanding the judgment in favor of the State was affirmed by the Court of Appeals, and its payment without further contest was promised, when the law was amended so as to limit the corporation tax to capital employed within the State. Execution for the collection of the amount was issued to the Sheriff of the County of New York by the Attorney-General on the 10th of December, and certain property was seized, but the judgment remained unsatisfied at the close of the year. The value of the various State funds on the 30th of September was as follows: Common-school fund, $3,880,657.39; United States deposit fund, $4,017,220.71; literature fund, $271,980.76; college land scrip fund, $474,409.12; total, $8,644,267.98. The balance in the State treasury was $2,711,144.21, which represented not the available cash but the condition of the general fund, assuming all valid appropriations to have been liquidated and all collections made. For the fiscal year the direct school-tax produced $3,180,393.90, and the total expenditures of the State for educational purposes amounted to $3,622,987.02. Both State and local expenditures for the maintenance of public schools amounted to $13,466,367.97.

Prisons.—The number of inmates in the three prisons of the State, on the 30th of September, was 2,961—at Auburn, 876; at Clinton, 544; and at Sing Sing, 1,541. The cost of care and maintenance for the year preceding was $373,222.53, which was exceeded by the earnings by $3,441.44. At Sing Sing, where the contract system of employing convicts remained in force, the earnings were $235,731.54 and the expenditures $162,729.23, showing a surplus of $73,002.31. At Auburn, where the average number of inmates for the year was 834, of whom 235 were still employed under contracts and 74 on State account in the manufacture of boots and shoes, the earnings were $76,166.08 and the expenditures $112,131.53, leaving a deficiency of $35,965.45. At Clinton, where for most of the year the inmates were employed on State account in the manufacture of clothing, the earnings were $64,766.35 and the expense of care and maintenance $98,361.77, leaving a deficiency of $33,595.42.

Railroads.—There was no material increase in the mileage of railroads for the year. While there was a substantial increase in the volume of traffic, there was a considerable diminution of earnings. The number of passengers carried one mile was 1,834,580,425, against 1,737,103,087 in 1884, an increase of 5·61 per cent.; tons of freight carried one mile, 9,902,683,295, against 9,326,068,865 in 1884, an increase of 6·18 per cent. The gross earnings were $111,632,961.47 in 1885, and $120,227,871.72 in 1884; operating expenses, 1885, $77,175,826.01, in 1884 $83,240,858.36; net earnings, 1885, $34,457,135.46, in 1884 $36,987,013.36. The aggregate of capital stock and debt for all the roads in the State was $1,292,395,622.44; cost of roads and equipment, $1,175,948,966.05. The percentage of gross income to cost and equipment was 8·46, and that of net income to capital stock, 1·09. The average earnings per ton per mile for freight in 1885 was ·73 cent, and in 1884, ·83; the average per passenger per mile was, in 1885, 2·13 cents, and in 1884, 2·42. The principal incident in the railroad history of the year was the passing of the New York, West Shore, and Buffalo Railway under the control of the New York Central and Hudson River. The property of the former was bought under a foreclosure of the mortgage by a committee in the interest of the latter on the 24th of November for $22,000,000. A new company was organized under the name of the

West Shore Railroad Company, with capital stock of $10,000,000 and bonded debt of $50,000,000 at 4 per cent. The stock of the new company was issued to the New York Central, and its property was leased for a period of 475 years to the latter corporation, which guaranteed the payment of principal and interest of its $50,000,000 bonds, or so much thereof as may be issued. Of these, $25,000,000 were to be given in exchange for the $50,000,000 of the old company under an agreement with the bondholders of the latter prior to the sale. The remainder were to be issued as circumstances might require for the benefit of the road.

Banks.—There are 92 banks of deposit and discount organized under State laws. Their aggregate resources on the 12th of September were $167,667,499, an increase during the preceding year of $10,221,224. There was an increase of $7,213,684 in deposits and $9,412,803 in loans and discounts. The surplus and undivided profits showed a decrease of $287,127. Two banks were closed and six organized during the year ending Oct. 1. There were 20 trust, loan, mortgage, and guarantee or indemnity associations, with resources amounting to $165,023,132.57. The system of examinations of State banks under authority of the Superintendent of Banking was adopted for the first time this year.

There were 126 savings-banks in operation at the beginning of the year, with an aggregate of resources amounting to $505,927,496, of which $68,669,001 was surplus. Interest on deposits for the year preceding amounted to $15,023,236, the average rate being ·0344. An application to permit investment of the deposits of savings-banks in the bonds of the State of Georgia was refused in the month of September, on the opinion of the Attorney-General that it would be a violation of the law that prohibits such investment in the bonds of any State that has within ten years defaulted in the payment of interest or principal of any of its legal obligations.

Charitable Institutions.—The value of property held for charitable purposes in the State is over $49,000,000. The receipts of the institutions under the supervision of the State Board of Charities for the year ending Sept. 30 amounted to $12,453,000, and their expenditures to $11,500,000. The number of insane persons in these institutions was 12,707, an increase for the year of nearly 600. The average number of blind persons in State institutions for the year was 373. The deaf and dumb pupils numbered 1,289, an increase of 38. The inmates of reformatories numbered 4,426; of orphan asylums and homes for the friendless, nearly 30,000; public hospitals, 3,397; poorhouses, 70,501.

The Civil Service.—The number of persons in the State subject to the civil-service regulations is 15,179, including 7,355 in the city of New York and 1,931 in Brooklyn. During the year 4,822 persons were examined and 2,725 appointed under the rules of the Civil-Service Commission. In their third annual report the commissioners say that, although three years have not yet elapsed since the passage of the Civil-Service Act, statistics of its working, both in the State and in the cities, corresponding with the results of the national system, and going beyond them in their variety of application, have already overthrown the ingenious arguments used by the opponents of the act to arrest the confidence of the people in the soundness of its principles. They also quoted from a letter of the Mayor of New York a statement of his belief that the effect of the application of the law to appointees had been in all respects good, and that the selection by competitive examination furnished an entirely satisfactory mode of filling vacancies, especially in the police and fire departments.

Just before the close of the year, the Superintendent of Insurance, John A. McCall, Jr., resigned his office, and Robert S. Maxwell, then State Treasurer, was appointed.

NEW YORK CITY. Debt and Sinking Fund.—When the amendment of the Constitution of the State of New York prohibiting cities of 100,000 inhabitants or more from incurring indebtedness in excess of 10 per cent. of the assessed value of real estate went into effect at the beginning of the year, the gross debt of the city of New York was $128,871,138.50, while the assessed value of real estate was $1,168,443,137, but of the outstanding bonds $34,173,338 were contained in the sinking fund. The question immediately arose whether the amount of the sinking fund was to be deducted in ascertaining the limit of indebtedness permitted under the constitutional restriction. If not, it was claimed that bonds could not be issued to pay for the lands for new parks, the acquisition of which was authorized by the Legislature of 1884, nor for the expenses of the Dock Department, which were provided for in no other way, nor for any other purposes, however necessary or desirable. The Mayor and Commissioners of the Sinking Fund, on advice of the Corporation Counsel, took the ground that the sinking-fund bonds could not be deducted, but, in order to test the question judicially, an order was made on application of the Dock Department for the issue of $2,000,000 of new bonds. Suit was immediately brought by certain holders of city bonds, interested in the security of the sinking fund, for an injunction restraining the issue. This was granted, and continued in force after a thorough consideration of the questions involved. The ground taken by Judge Joseph F. Daly, of the Court of Common Pleas, in deciding the case in December, was that the bonds in the sinking fund were valid outstanding obligations of the city, held in trust not only for the city but for the creditors. They were not extinguished when acquired for the sinking fund, nor could hey be canceled. Being valid outstanding obligations, they could not be excluded in calculating the sum of the city debt, and no new bonds could be issued, except for water-supply, so long as that sum exceeded the constitutional limit. This decision was upheld by the General Term of the court in a decision rendered Feb. 1, 1886, from which an appeal was taken to the Court of Appeals.

Expenditures and Taxes.—The assessed valuation of property for the year was: Real estate, $1,168,443,137; personal property, $202,673,-866; total, $1,371,117,003; a net increase over 1884 of $32,818,660. The increase in real estate was $48,817,051, and there was a decrease of $15,998,391 in personal property. The number of pieces of real estate assessed was 159,-432. There were 75 banks, whose shares were assessed to the holders upon an aggregate valuation of $60,746,294. The total assessment of real estate for 1886, as returned by the Department of Taxes and Assessments, and subject to revision, is $1,206,112,404. The State Board of Equalization added $112,148,890 to the valuation of real estate for 1885 in making its adjustments for purposes of State taxation, which threw nearly 47 per cent. of the whole State tax upon the city. Its action was brought before the Supreme Court at Albany for review by a writ of *certiorari*, but the matter had not been determined at the close of the year. The controversy with the Manhattan Railway Company over the taxation of the elevated railroads was settled by an agreement that was accepted by the company. The capital stock of the New York Company was estimated at $7,800,000, and from this was deducted the assessed value of real estate and structure, $4,361,306, leaving $3,438,694 as capital subject to assessment. The assessed value of real estate and structure of the Metropolitan Company was $6,991,200, and, as this exceeded the estimated value of capital, there was no assessment on the latter. The capital stock of the Manhattan was taken as $15,522,-125, and $599,200 deducted for real estate and structure, and $11,655,271 as the value of the stocks of the other companies owned by it, leaving $3,327,655 as the amount subject to assessment. This made the taxable value of the whole system $11,527,354, yielding to the city about $300,000.

The municipal appropriations for all purposes for the year amounted to $34,078,465.41, of which $2,000,000 was furnished by the general fund. The final estimates for 1886 were $35,-736,320.05, of which $2,250,000 was to be met by the general fund, leaving $33,486,320.59 to be raised by taxation. Of this, $4,199,606.15 was required for State taxes, $7,456,184.37 for interest on the city debt, and $857,217.75 for redemption of principal of the debt. Aside from these items there were about $10,000,-000 of the annual municipal expenditures that were fixed by acts of the Legislature, leaving only $13,594,722.88, or less than two fifths of the whole, subject to the discretion of the Board of Estimate and Apportionment. The most costly departments of the municipal government and the appropriations therefor are the following: Board of Education, $4,700,300; Police, $3,853,272; Public Works, $2,771,090; Fire Department, $1,841,979; Charities and Correction, $1,552,300; Asylums, Reformatories, and Charitable Institutions, $1,205,073; Street Cleaning, $1,100,000; Parks, $1,075,750.

New Aqueduct.—The work on the new Croton Aqueduct proceeded under contract during the year. The whole amount of bonds issued for the work is $3,061,438, and the amount expended to the end of the year was $2,094,704.-93. The question of constructing a vast storage reservoir by means of a dam at Quaker Bridge was still in abeyance, but it was decided to build the Croton dam on one of the branches of the Croton river at an estimated expense of $1,250,000, which will increase the present storage reservoir capacity to about 21,000,000,-000 gallons.

Power of Appointment.—The controversy over the conduct of Mayor Edson, at the close of 1884, in making certain appointments notwithstanding an injunction from the Superior Court, was settled by the General Term of that court in favor of the ex-Mayor, which cleared him from the charge of contempt that had been upheld by Judge Freedman. The ground of the decision was that the Mayor, in appointing a Commissioner of Public Works and Corporation Counsel, exercised a discretion conferred upon him by the Legislature which could not be brought in question before a court. An executive act, it was said, vested by the organic law of the State in the officer appointed to perform it, is "beyond the jurisdiction and control of the judicial power." The cases of a Police Commissioner appointed in 1884, when, as was claimed, the term of the incumbent of the place had not expired, and of the Corporation Counsel appointed by the President of the Board of Aldermen after expiration of the term of office of the Mayor (see "Annual Cyclopædia," 1884, pp. 589, 590), were carried to the Court of Appeals, where in the month of April the decisions of the lower court were sustained. In the case of the Police Commissioner it was held in effect that an officer appointed to succeed another holding over from an expired term retains the office only to the end of the term that has begun, and not for a full term beginning with his appointment. In the other case it was held that the President of the Board of Aldermen had no power to make appointments as Mayor in the interval between the alleged expiration of the term of office of Mr. Edson at midnight of Dec. 31 and the beginning of that of Mr. Grace at noon Jan. 1. The Court did not pass on the question whether there was an actual vacancy in the office of Mayor during those twelve hours, but declared that it was the plain purpose of the law of 1884 to give the appointment of the officers to be selected at the beginning of the year to the new Mayor.

In the case of Sheriff Alexander V. Davidson, charged before the Governor with malfeasance in office, the proceedings were dismissed by Gov. Hill on the 3d of March, on the ground that sufficient cause for removal from office had not been shown.

Changes in Office.—On May 9 the Mayor had occasion to make a number of appointments, among the first to be made without confirmation by the Board of Aldermen. His selections were as follow: City Chamberlain, for a term of four years, William M. Ivins, formerly his private secretary; Commissioner of Jurors, Charles Reilly; Park Commissioner, term of six years, Matthew D. C. Borden; Fire Commissioner, to succeed Cornelius Van Cott, term expired, Henry D. Purroy, already a member of the commission; Fire Commissioner, to succeed Purroy, unexpired term of two years, Edward Smith; President of the Board of Taxes and Assessments, to succeed Thomas B. Asten, Republican, term expired, Michael Coleman, Democrat, former Supervising Deputy in the department; Dock Commissioner, to succeed William E. Laimbeer, James Matthews, previously a Police Commissioner; Police Commissioner, to succeed Matthews, John R. Voorhis, previously Dock Commissioner; Dock Commissioner, to succeed Voorhis, Joseph Koch, formerly Democratic member of the State Senate; Commissioner of Charities and Correction, Dr. Charles E. Simmons. In June the Mayor made charges against the assessors in the Department of Taxes and Assessments, and secured their removal and the appointment of others more satisfactory to himself.

Investigation of Municipal Affairs.—During the autumn a committee of the State Senate made an investigation of the administration of the affairs of the city. Evidence was obtained tending to show that the commission to select sites for new armories in the city, consisting of Gen. Alexander Shaler, commander of the First Division of the National Guard, and also President of the Board of Health Commissioners, and the Mayor and Commissioners of Public Works, had, through the corrupt collusion of Gen. Shaler with private parties, paid an unnecessarily high price for the land, part ot the purchase-money going to the benefit of Shaler and an agent who had acted as an intermediary in the transaction. The evidence was submitted to the Mayor and District Attorney. The former made it the basis of charges against Gen. Shaler for his removal from the Health Board, and the latter laid it before the grand jury and obtained an indictment against the same officer for malfeasance in office. Pending the trial on this indictment, the Mayor's charges were not pressed. The trial of Gen. Shaler in January, 1886, resulted in a disagreement of the jury. The same committee collected a mass of evidence against the Excise Commissioners, which was also placed at the service of the Mayor and District Attorney. The former framed charges against the commissioners to be laid before the Governor of the State, on which he was asked to remove these officers. The principal charge was that they had granted licenses for the sale of intoxicating liquors to persons who kept disreputable resorts. The Governor ordered a special inquiry by a commissioner of his own selection, the result of which had not been announced at the end of the year. The District Attorney took no action in the matter. The general results of the investigation of the Senate committee were submitted to the Senate in a formal report soon after the beginning of the session of 1886. The committee had been urged to inquire into allegations that the consent of the Board of Aldermen in 1884 to the franchise for constructing a horse-railway in Broadway had been obtained by bribery, but it failed to take up the inquiry.

Municipal Politics.—The Tammany organization took a prominent part in securing the nomination of Gov. Hill for re-election, which was generally opposed by the rival Democratic organization known as the County Democracy. Tammany took ground directly against the Civil-Service Law. After the State Convention it endeavored to secure a union of the two Democratic factions in support of a single county ticket. Its County Convention, after nominating George C. Barrett for the Supreme Court, postponed further action and appointed a committee of conference. The County Democracy declined its overtures, declaring that the principles and methods of the two organizations were diametrically opposed to each other.

The Tammany candidates were elected, with the exception of Ransom for Judge of the Superior Court, Sedgwick being re-elected to that office. The total vote of the city for Governor was 200,338, of which 123,603 were for Hill, 75,364 for Davenport, 1,215 for Bascom, and 156 for Jones. For Sheriff, Grant received 74,151, Jacobs 65,506, and White 58,489.

Underground-Wire Commission.—The commission provided for by act of the Legislature to supervise the laying of electric wires underground was appointed in the month of June. By the votes of the Comptroller and Commissioner of Public Works against that of the Mayor, Charles E. Loew, Theodore Moss, and Jacob Hess were named; the candidates of the Mayor being Prof. Charles F. Chandler, Frank L. Pope, and John P. Townsend. The commissioners held their first meeting on the 20th of July, and appointed Mr. Loew president and Mr. Moss secretary. Sixty days were allowed for the submission of plans by the companies owning and controlling electric wires, but no plans were submitted by them. Three hearings were given for the consideration of plans proposed by others, but nothing had been decided upon at the end of the year.

Street Railroads.—The consent of the Board of Aldermen was given in 1884 to the construction of a horse-railroad in Broadway below Fifteenth Street, by the Broadway Surface Railroad Company, and, in lieu of the consent of property-owners, a commission had been appointed by the Supreme Court to ascertain whether the public interests required the construction of such a road. This commission reported favorably in March, and the report was confirmed by the General Term of the court in May, Chief-Justice Noah Davis dissenting. The main condition of the franchise was the payment to the city of $40,000 annually, in addition to the percentage of gross receipts required by law. The construction of the road was begun on the 23d of May, and on the 21st of June it was in operation over the whole line of more than two miles from Union Square to Bowling Green. All the omnibuses that had run in Broadway for many years were withdrawn. A company was organized for the purpose of constructing a railroad in Fifth Avenue, but the project was vigorously opposed. The act authorizing the repavement of that thoroughfare prohibited the laying of railroad-tracks therein. A report favorable to the scheme of railroad lines to be operated by cable, as laid out by commissioners appointed by the Rapid Transit Act of 1875, was made to the Supreme Court in August by the commissioners appointed by the Court to inquire into the advisability of their construction, but had not at the end of the year been confirmed. A new company was organized near the end of the year, under the General Tunneling Act, for the construction of an underground railway under Broadway and Madison Avenue.

Statue of Liberty.—The colossal Statue of Liberty Enlightening the World, the work of M. Bartholdi, presented to the people of the United States by the people of France, arrived on the 19th of June, and was received with appropriate ceremonies. The pedestal on Bedloe's Island in the harbor, provided by popular subscription, was not completed, but the work was well advanced before the end of the year.

NEW ZEALAND. See page 66.

NICARAGUA, a republic in Central America. Area, 51,600 square miles; population in 1883, 275,815. The capital is Managua, population 9,000.

Government.—The President is Dr. Adam Cárdenas, elected in 1883. His Cabinet was composed of the following ministers: Finance, War, and Navy, Gen. J. Elizondo; Minister of State, Justice, and Public Worship, Dr. F. Delgadillo; Foreign Affairs, Señor F. Castellon; Interior, Señor J. Chamorro, who is also President of the Senate, while Señor J. Rodriguez is President of the House of Representatives. The Archbishop of Nicaragua is Señor F. Ulloa de Larios. The Nicaraguan Minister at Washington is Gen. Joaquin Zavala.

The Ship-Canal.—The report of Civil Engineer Menocal, U. S. Navy, on the Nicaraguan Canal route recently surveyed, has been made public, and may be summed up as follows:

The proposed route extends from the harbor of Greytown, on the Caribbean Sea, to Brito, on the Pacific. Its total length is 169·8 miles, of which 38·98 miles will be excavated canal and 130·82 miles navigation by Lake Nicaragua, the river San Juan, the basin of the river San Francisco, and seven locks. The eastern division, 19¼ miles in length, comprises 63 per cent. of the total excavation of the entire canal. This portion of the line is upon an entirely new location, beginning at the southern extremity of the proposed inland lake. In the San Francisco valley the canal runs nearly due east through a broad, flat valley a distance of about 1,600 feet, the average elevation being 125 feet above the sea level, or 19·13 feet above the level of the canal. Thence across projecting spurs the divide is reached at an elevation of 280 feet in a distance of 4,600 feet from the basin of the San Francisco. The line then curves with a radius of 10,733 feet for a distance of 2,500 feet across the little plain at the summit, cuts a deep, narrow spur, enters the valley of a stream called Deseado, the bed of which it follows a short distance, then crosses to the left bank of that stream and reaches the site of lock No. 3 in a rocky spur of northern hills, 14,200 feet from the canal-level on the other side, the average depth of the cut for this distance being 119·5 feet above the water in the canal. It is estimated that the canal can be completed in six years, and will cost, including a contingent of 25 per cent. added, $64,043,697.

Railroads.—There were in operation, in 1885, the line from Corinto to Chinendega, 12 miles; and one from the latter place to Leon Viejo *via* Leon, 45 miles. In August the net earnings of the eastern section were $1,187. A railroad is in course of construction from Managua to Granada, 32 miles. The grading is done and track laid as far as Masaya, 12 miles from Managua. The civil engineer for the Government, under whose supervision the roads are constructed, is an American citizen, as is also the mechanical engineer.

Telegraphs.—Dating from Oct. 1, the cable telegraph-office at San Juan del Sur raised the rate of messages to the United States from $1.25 a word to $1.35, and to England, France, and Germany, from $1.88 to $1.90. All telegraphic messages sent to Nicaragua are subject to Government censorship.

In December the telephone went into operation between Managua and Masaya.

River Communication.—The harbor of San Juan del Norte, through the changing of the course of San Juan river and other causes, has almost entirely filled, and great difficulty is encountered in discharging freight. Communication with Granada and the interior is by means of the San Juan river. Steamboats ply between San Juan del Norte and Granada; but, owing to the numerous rapids and low water, the navigation of the river is difficult and requires several handlings of freight.

Earthquake.—There was felt throughout the republic, on Oct. 12, a violent shock of earthquake, lasting long enough to cause some destruction at Chinendega, Managua, and Leon, and the loss of two lives. A good many of the principal churches were reduced to a precarious condition. Simultaneously, the volcano Cosiguina opened wide chasms in its flanks, a loud rumbling noise was heard, and stones were thrown from the crater. The volcano Viejo also parted in several places.

Finances.—The public indebtedness consisted, on Jan. 1, 1885, of the consolidated debt, $106,397; the railroad debt, $222,270; and the floating debt, $580,040; forming a total debt of $908,707, while there were available funds in the treasury on that date to the amount of $598,534.

The political troubles in Central America, and the expenses of three military expeditions, interfered somewhat with the usually flourishing state of the national finances; the timidity of capitalists caused a scarcity of specie, and induced the Government to have recourse to paper money. In December $25,000 worth of ten-cent bills were issued.

Commerce.—The chief exports in 1883–'84 consisted of India-rubber, of which there were shipped 28,748 quintals, worth $1,318,164; coffee, 126,964 quintals, $1,209,306; fustic, $645,904; the remainder being indigo, hides and skins, cattle, cedar-wood, and gold-dust.

Ports.—Formerly San Juan del Norte was the first port in commercial importance, but since rail communication has been made between Corinto and the interior, Corinto may now be considered the principal port. All commerce with the interior cities passes through this port, with the exception of that for the cities of Granada and Rivas. San Juan del Norte is a free port. Merchandise for the interior passing through it pays duty at Castillo Viejo, on San Juan river.

NORTH CAROLINA. State Government.—The following were the State officers during the year: Governor, Alfred M. Scales, Democrat; Lieutenant-Governor, Charles M. Stedman; Secretary of State, William L. Saunders; Treasurer, Donald W. Bain; Auditor, William P. Roberts; Attorney-General, Theodore F. Davidson; Superintendent of Public Instruction, Sidney M. Finger. Supreme Court: Chief-Justice, William N. H. Smith; Associate Justices, Thomas S. Ashe and Augustus S. Merrimon.

Legislative Session.—The Legislature met on Jan. 7, and adjourned on March 11. Among the important acts passed were:

To increase the number of Superior Court Judges.

In regard to actions against administrators.

To provide for the erection of fences around stock law districts.

Extending time for settling the State debt.

To extend time for adjusting and renewing State debt.

Making it unlawful for physicians to disclose information disclosed by patients.

To make seduction of women under promise of marriage criminal.

To establish a true meridian in the several counties of the State.

To require the registration of deeds.

To prohibit the importation of obscene literature.

To incorporate the Confederate Home Association.

To establish a State flag.

To establish and maintain an Industrial School.

To lay off the oyster-beds, and providing for the sale of the oyster-waters by the State.

A large number of railroad acts and of amendments to existing laws.

Zebulon B. Vance, Democrat, was re-elected United States Senator.

Financial.—The following is a general statement of the receipts and disbursements for the year ending Nov. 30, 1885:

Balances in the treasury Dec. 1, 1884:		
Educational fund	$20,981 58	
Public fund	926,086 98	
		$947,068 56
Receipts for the fiscal year:		
Educational fund	$7,176 54	
Public fund	378,957 62	
		386,134 16
Grand total		$1,333,202 72
Disbursements for the same time:		
Educational fund	$5,195 14	
Public fund	795,486 26	
		$800,681 40
Balance in treasury Nov. 30, 1885		$532,521 32

Industries.—In 1880 the assessed valuation of property amounted to $156,268,241, while for this year it amounts to $222,300,000, an increase of $66,031,759. The tobacco industry is credited largely with this increase, and the crop is far in excess of any previous one. The peanut-crop has seldom been estimated at over 150,000 bushels in former years, but in 1884 there was a large increase in acreage, and the production is reported at 300,000 bushels. This crop is marketed at Wilmington, and there was reported to be on hand there 50,000 bushels of the old crop to be carried into the new year beginning Oct. 1, 1885.

NOVA SCOTIA. Government.—The Lieutenant-Governor is Matthew Henry Rickey. Executive Council: Premier, Provincial Secretary, and President of the Council, W. S. Fielding; Attorney-General, A. J. White; Commissioner of Works and Mines, C. E. Church; without office, Thomas Johnson, T. F. Morrison, Isidore Le Blanc, and J. W. Longley.

Repeal Movement.—At the opening of the Provincial Legislature the Lieutenant-Governor announced that no reply had been received from the Federal Government to the memorial of the Legislature sent in 1884, demanding financial assistance for the province. This memorial sets forth that, previous to confederation, the province was in a healthy financial condition, but now it has not sufficient revenue for its wants. It complains that the tariff operates unequally upon the various provinces and unfairly to Nova Scotia. It declares that, previous to confederation, Nova Scotia had the lowest tariff and was in the best financial condition of all the provinces; that as it made the greatest sacrifices upon entering the union, the province ought not to be left in a worse financial condition than the others. At the time of the union it was estimated that a sum amounting to 28½ per cent. of the customs revenue collected under a 15 per cent. tariff, together with the revenue from local sources, would be sufficient for local purposes, and that the remaining 71½ per cent. of the customs duties, with other sources of revenue allotted to the Federal Government, would be sufficient for its wants. Experience has shown that the 15 per cent. tariff did not yield enough revenue for the wants of the country, and the Dominion Parliament has added 50 to 55 per cent. to the 15 per cent., and appropriated the whole to its own purposes. The memorial declares that additional revenue is an absolute necessity for Nova Scotia, and that the people will not submit to direct taxation while they believe that if justice were done to the province it would have sufficient revenue for its local wants. Complaint is made of the Federal Government appropriating to the general purposes of the Dominion the amount received from the United States under the fishery award. Finally, the memorial demands that, as the taxation of the country has increased 50 per cent. since confederation, the provincial subsidy should be increased in the same proportion.

On Feb. 24 Mr. Fraser introduced the following resolution in the Assembly:

Whereas, The financial and commercial condition of Nova Scotia is in a very unsatisfactory state; whereas, it is evident that the terms of the British North America Act, combined with the Canadian tariff and fiscal laws, are the principal causes contributing to this unsatisfactory state of the finances and trade of the province; whereas, there is no prospect that, while the province remains upon the present terms of union as a member of the Canadian Federation, any improvement in the foregoing respect is at all possible; whereas, it seems evident that the interests of the people of the several maritime provinces, now incorporated with Canada, are in most respects identical; therefore,

Resolved, That this branch of the Legislature of Nova Scotia is of the opinion, and hereby declares the belief, that the interests of the people of Nova Scotia, New Brunswick, and Prince Edward Island would be advanced by withdrawing from the Canadian Federation and uniting under one government; and it is further

Resolved, That, if the governments of New Brunswick and Prince Edward Island and the people thereof be found unwilling to withdraw from the Canadian Confederation for the purpose of forming a union of the maritime provinces, then this Assembly deems it absolutely necessary that Nova Scotia, in order that its railways and other public works and services may be extended and maintained as the requirements of the people need them, its industries and properties protected, its commerce invigorated and expanded, and its financial interests placed upon a sound basis, the same as was the case previous to confederation, should withdraw from the union and return to the status of a province of Great Britain, with full control over all fiscal laws and tariff regulations within the province, such as prevailed before 1867; and further

Resolved, That the government of Nova Scotia will, after the prorogation of the Legislature, take preliminary action for the purpose of facilitating the wish of the Assembly by entering into negotiations with the governments of New Brunswick and Prince Edward Island, in order that the Legislature of Nova Scotia may be fully advised during its next session, and be thereby enabled to place this vital and important question before the people at the approaching elections for decision at the polls.

On a subsequent day Mr. Fielding, the Premier, while approving most of the arguments in favor of the repeal movement, asked his supporters to defer passing the resolution until a settlement of the "better-terms" question pending at Ottawa. He moved in amendment "that all the words after 'whereas' be omitted, and the following be inserted in place thereof":

Previous to the union of the provinces, the province of Nova Scotia was in a most healthy financial condition. Whereas strong objections were taken at the time of the union to the financial terms thereof relating to the province of Nova Scotia, as being wholly inadequate to meet the requirements of the various services left under the management of the Provincial Parliament; and whereas, after seventeen years under the union, successive governments have found that the objections which were urged against the terms of the union at first apply with greater force now than in the first year of the union, and the feeling of discontent, with regard to the financial arrangement, is now more general and more deeply fixed than ever before; and whereas, these facts have been brought to the notice of his Excellency the Governor-General and the Federal ministry by an address unanimously passed by the Legislative Council and the House of Assembly, and also by the representations of a delegation from the provincial government without satisfactory results up to this time; therefore,

Resolved, That, if the Government and Parliament of Canada fail to make provision during the present session to place the province of Nova Scotia in a better financial position in the union, this house affirms that it will be necessary to consider the advisability of taking steps to secure a severance of the political connection between the province and the Dominion of Canada.

Both the main motion and the amendment were opposed by the Opposition. The latter was carried. The Dominion Parliament did not deal with the question of the Nova Scotia subsidies at this session.

The Franchise.—A bill to extend the franchise was passed. Under the old law the qualification required was assessment upon real estate to the value of $150, or on real and personal or personal property alone to the amount of $300. The bill extends the franchise to the sons of all persons assessed as far as the amount assessed will give each the required property qualification. An amendment to extend the franchise to unmarried women with the same property qualification as men, was defeated by a majority of one vote.

Fisheries.—The Nova Scotia fishermen held a meeting, and passed a resolution requesting the Dominion Government and Parliament to take steps to secure a reciprocity treaty with the United States, and, in the event of such a proposition not being entertained by the Government at Washington, that the revenues of Canada be pledged, and the assistance of England asked, to such an extent as may be necessary to protect the resident fishermen in their rights within the three-mile limit.

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OBITUARIES, AMERICAN. **Alden, Joseph,** an American author and educator, born in Cairo, N. Y., in 1807; died in the city of New York, Aug. 30, 1885. He began teaching in a public school at the age of fourteen, and developed a decided talent in this line. He was graduated at Union College in 1828, and three years later at Princeton Theological Seminary, where he remained as tutor for two years. He next became pastor of a Congregational church in Williamstown, Mass.; but as his voice failed him in the course of two years, he accepted an academic chair, and became Professor of Latin and then of Rhetoric and Political Economy in Williams College. He occupied this post from 1835 to 1853, when he was called to Lafayette College, as Professor of Mental and Moral Philosophy. In 1857 he was chosen President of Jefferson College, Cannonsburg, Pa., where he remained until 1862. He then took a rest for several years from active labors, but in 1867 was made Principal of the Albany (N. Y.) Normal School. This post Dr. Alden resigned in 1872, and thenceforth he devoted his time chiefly to the department of Sunday-school literature, and prepared seventy or more volumes for the young. He also prepared a textbook on intellectual philosophy, and contributed largely to periodical literature. Dr. Alden was at one time editor of "The New York Observer," at another of "The Philadelphia Christian Library."

Arthur, Timothy Shay, an American author, born near Newburg, N. Y., in 1809; died in Philadelphia, March 6, 1885. He went to Baltimore, Md., early in life, and edited a paper there called "The Athenæum." In 1841 he removed to Philadelphia, where he resided for the rest of his life. Mr. Arthur was a voluminous writer of tales illustrative of American domestic life, all having a good moral end in view. Among his productions are, "Lights and Shadows of Real Life," "Tales for Rich and Poor" (6 vols.), "Library for the Household" (12 vols.), "Ten Nights in a Bar-Room," and "The Good Time Coming." He was actively engaged in literary work to the last, and was editor of "Arthur's Home Magazine" until within a few weeks of his death.

Atlee, John Light, an American physician, born in Lancaster, Pa., Nov. 2, 1799; died there, Oct. 1, 1885. He was a son of Col. W. P. Atlee, a Revolutionary officer, and received his education and training in Lancaster and Philadelphia. He studied medicine, and graduated from the University of Pennsylvania in 1820. He then returned to his native city, began the practice of medicine, and soon became successful, especially in surgical cases. Dr. Atlee's operation for double ovariotomy, in 1843, was the first in the history of medicine, and the patient is said to be still living and in good health. He was one of the founders of the Lancaster City and County Medical Society in 1843, and twice served as its president. He assisted in organizing the Pennsylvania Medical Society in 1848, and became its president in 1857. He was also one of the organizers of the American Medical Association in Philadelphia, and was elected vice-president in 1865, and president in 1882. Dr. Atlee was Professor of Anatomy and Physiology in Franklin and Marshall College for many years, was a school director for forty years, was President of the Board of Trustees of the Pennsylvania State Lunatic Asylum at Harrisburg, was elected Honorary Fellow of the American Gynecological Society in 1877, and was trustee of numerous public institutions.

Bangs, Francis Nathan, an American lawyer, born in New York city about 1824; died in Ocala, Fla., Nov. 30, 1885. He was a son of Rev. Nathan Bangs, a well-known Methodist circuit rider and preacher, and was graduated at the University of the City of New York in 1848. He entered the Law School of Yale College, and supported himself during his course by cataloguing books, etc. He returned to New York, was admitted to the bar in 1850, formed a partnership with Judge Sedgwick, and soon became prominent in his profession, with abundance of business in bankruptcy cases. He was active in the proceedings against Judges Barnard, Cardozo, and McCunn, and also in the Cesnola suits, and the Havemeyer estate suits. Of late years the firm of Bangs & Stetson has been known as a railroad law firm, in charge of several important international cases. Mr. Bangs was a Republican in politics, and was one of the originators of the Union League Club in New York city. He was twice married, and left three sons.

Billings, Josh. See Shaw, Henry W.

Bliss, Porter Cornelius, an American journalist, born in Erie County, N. Y., Dec. 28, 1838; died in New York city, Feb. 2, 1885. He was a son of the Rev. Asher Bliss, for many years missionary to the Indians on the reservations in western New York. He studied at Hamilton and Yale Colleges, and in 1860 traveled through Maine, New Brunswick, and Nova Scotia, to investigate the condition of the remnants of Indian tribes. In 1861 he went to Washington to apply for a place in the Interior Department that would give him an opportunity to make similar investigations beyond the Mississippi; but as he was disappointed in this, he accepted the post of private secretary to Hon. James Watson Webb, who had just been appointed Minister to Brazil. In 1862, when Mr. Webb returned home, Mr. Bliss went to Buenos Ayres, and was commissioned by the

Argentine Government to explore the Gran Chaco, where he spent eight months in learning the Indian dialects and investigating the antiquities. The results were published by the Government. He edited for a short time, at Buenos Ayres, the "River Plate Magazine," and then went to Paraguay, where he became private secretary of the United States Minister, Hon. C. A. Washburne, in 1866. President Lopez commissioned him to write a history of Paraguay; but while he was engaged in this work the war between that country and Brazil broke out, and he fell under suspicion from the fact that he had formerly been in Brazil. The Government archives were closed to him, detectives watched him, and finally, as he was trying to leave the country, he was thrown into prison, where he was subjected to torture to compel him to confess that he had been a Brazilian spy. At the end of three months (December, 1868) he was released on the demand of the United States Government, backed by the presence of a squadron of the United States navy. He went to Washington, was a translator in the War Department for about a year, and edited the Washington "Chronicle" for a year and a half, and was then (July, 1870) appointed Secretary of Legation in Mexico, which office he held for four years. During that time he was an active member of the Mexican Geographical Society, made archæological explorations, and wrote much on the condition of Mexico and its opportunities for American enterprise. By his sole personal exertions he saved from execution three American officers in the army of Diaz, who had been captured by the forces of Juarez and condemned by a court-martial. In the summer of 1874 Mr. Bliss came to New York, and for the next three years he was at work on "Johnson's Cyclopædia." After that he edited a short-lived weekly called "The Library Table," wrote a history of the Russo-Turkish War of 1877, and in 1879 went to South America as a correspondent of the "New York Herald." From the time of his return, a year or two later, till his death, he was in feeble health and did but little work, though he edited the "New Haven News" for a part of the year 1883. He was for two years President of the Philological Society, and was an enthusiastic student of Oriental antiquities.

Brown, Benjamin Gratz, an American lawyer, born in Lexington, Ky., May, 28, 1826; died in St. Louis, Mo., Dec. 13, 1885. He was graduated at Yale College in 1847, was admitted to the bar in Louisville, Ky., and soon afterward settled in St. Louis, which was thenceforth his home. He was a member of the Missouri Legislature from 1852 to 1859, and in 1857 made there a remarkable anti-slavery speech, which is said to have been the beginning of the Free-Soil movement in that State. He edited the "Missouri Democrat" for five years (1854–'59), constantly opposing the pro-slavery party, and was often threatened with personal violence therefor, on one occasion being wounded by a pistol-shot. In 1857 he was the Free-Soil candidate for Governor, and came within five hundred votes of election. On the breaking out of the war in 1861, he gave all his influence to the support of the Union, and was in close consultation with Gen. Lyon when he planned the capture of Camp Jackson and broke up the first secession movement in St. Louis. Brown commanded a regiment of militia on that occasion, and afterward, during the invasion of the State by Price and Van Dorn, a brigade. He was a member of the United States Senate from 1863 to 1867, and in 1871 was elected Governor of Missouri, on the Liberal Republican ticket, by a majority of 40,000. In 1872 he was the candidate for Vice-President on the ticket with Horace Greeley, and after the close of the canvass he resumed his law practice.

Brown, Samuel Gilman, an American educator, born in North Yarmouth, Me., Jan. 4, 1813; died in Utica, N. Y., Nov. 4, 1885. He was a son of the Rev. Dr. Francis Brown, President of Dartmouth College in 1815–'20, and was graduated there in 1831. For a while he was Principal of the High School in Ellington, Conn.; then he entered Andover Theological Seminary, where he was graduated in 1837 He was two years Principal of Abbot Academy at Andover (1835–'38), after which he occupied two years in travel abroad. On his return he was appointed Professor of Oratory and *Belles-lettres* in Dartmouth College, which chair he held till 1863, when he was appointed to the chair of Intellectual Philosophy and Political Economy. He resigned this in 1867, in order to become President of Hamilton College. His health becoming impaired, he resigned in 1881, and gave only occasional instruction at Dartmouth and Bowdoin, residing chiefly at Utica, N. Y. His best-known literary work is a "Life of Rufus Choate." His son Francis is professor in the Union Theological Seminary, New York.

Burnham, Gordon W., an American manufacturer, born in Hampton, Conn., in 1802; died in New York city, March 18, 1885. He began life as a poor boy, but by energy and perseverance improved his position. He engaged in manufacturing wooden buttons at first, and then, in company with Mr. Benedict, enlarged operations so as to manufacture brass buttons and various kinds of brass goods. He was also connected with other manufacturing enterprises, all of which were successful and remunerative. He acquired a fortune amounting, it is said, to several million dollars. Mr. Burnham made liberal use of his money for public good, and gave freely to the support of religion.

Claflin, Horace Brigham, an American merchant, born in Milford, Mass., Dec. 18, 1811; died in Fordham, N. Y., Nov. 14, 1885. His father was a prosperous merchant in his native village. The son received a good common-school education, and entered his father's store. But on coming of age he went into business for himself, and a year later removed to Worcester, where, with his brother-in-law, Samuel Daniels, he was soon engaged in the dry-goods trade on a comparatively large scale. In 1843 they dissolved the partnership, and Horace removed to New York, where the firm of Bulkley & Claflin was established, importers and jobbers of dry goods, in Cedar Street. In 1851 some changes were made, and the firm name became Claflin, Mellin & Co. After further changes, in 1864 it became H. B. Claflin & Co., which it has since remained. This house has done an immense business, extending all over the country, with a financial strength that has carried it unshaken through all crises save one. When the civil war broke out in 1861, the sudden loss of debts at the South was so great as to cause a temporary suspension of payment; but by the wise forbearance of Northern creditors the house was permitted to continue business, and in a short time all its liabilities were paid off with interest, after which it entered upon a career of unparalleled prosperity. For many years it has occupied an enormous warehouse at West Broadway and Worth Street, Mr. Claflin being the active head of the establishment. In a single year the sales of this firm have amounted to $72,000,000, and since 1864 it has done by far the largest mercantile business in this country, or indeed in the world. Mr. Claflin was a man of domestic habits and of exemplary life, fond of books and of horses, was a trustee (but not a communicant) of Plymouth Church, Brooklyn, and a devoted personal friend of its pastor. In politics he was a Whig in his early life, and afterward a Republican. His private acts of charity are said to have been numerous.

Coit, Thomas Winthrop, an American clergyman, born in New London, Conn., June 23, 1803; died in Middletown, Conn., June 21, 1885. He was graduated at Yale College in 1821, and studied for the ministry. He was, for a brief period, professor in Trinity College, Hartford, Conn., and President of Transylvania University, Lexington, Ky. He became rector of St. Peter's Church, Salem, Mass., in 1827; of Christ Church, Cambridge, Mass., in 1829; and of Trinity Church, New Rochelle, N. Y., in 1839. A few years later he accepted the rectorship of St. Paul's Church, Troy, N. Y., which place he held for nearly twenty-five years. He was appointed lecturer on ecclesiastical history in the Berkeley Divinity School in 1854, the duties of which office he discharged in connection with his rectorship in Troy. In 1872 he resigned his church, was appointed professor in the Divinity School, and removed to Middletown, Conn. He contributed largely to the literature of the Church, and his work entitled "Puritanism, or a Churchman's Defense against its Aspersions, by an Appeal to its own History" (1845), is a shrewd turning of the tables upon the Puritans in England and America. Dr. Coit published several volumes, both scholarly and useful, and his latest work was a valuable paper forming part of Bishop Perry's "History of the American Protestant Episcopal Church." His large and excellent library he gave to the Berkeley Divinity School.

Draper, John Christopher, an American physician, born in Virginia, March 31, 1835; died in New York city, Dec. 20, 1885. He was the oldest son of Prof. John W. Draper, and entered the University of the City of New York in 1852, but left before completing the course. He then entered the medical department of the university and was graduated in 1857. In July of that year he went to Europe, partly for health, partly for study. On his return, in December, 1858, he was appointed analytical chemist in the university, which place he held for thirteen years. In 1860 he became Professor of Chemistry in the Cooper Institute, and in 1862 he served as surgeon in the United States Volunteers. In 1863 he was elected to the chair of Natural History in the College of the City of New York, which post he filled up to the time of his death. He became Professor of Chemistry in the medical department of the University of the City of New York, and was largely instrumental in raising the reputation of that department. Prof. Draper was the author of several books in his special line of study. His earliest volume (1865) was on anatomy, physiology, and hygiene. He contributed numerous articles to the "Galaxy," from 1868 to 1871, on diet, dress, and ventilation. In 1872–'73 he edited "The Year-Book of Nature and Science," and in 1882 published "A Practical Laboratory Course in Chemistry." His last publication was an advanced text-book on medical physics, with several hundred illustrations. He left a widow, but no children.

Elsberg, Louis, an American physician, born in Iserlohn, Prussia, April 2, 1836; died in New York city, Feb. 19, 1885. He emigrated to Philadelphia with his parents in 1849, was educated in the public schools of that city, and was graduated at Jefferson Medical College in 1857. For six months after graduation he was resident physician at Mount Sinai Hospital in New York. He then studied in Europe for a year, and returning, settled for practice in New York. He delivered a course of lectures at University Medical College in 1861, and in 1862 established the first public clinic for diseases of the throat. This was his specialty, and he contributed largely to the literature of the subject, both by lectures and published papers. In 1865 a prize gold medal was awarded by the American Medical Association to his essay on "Laryngoscopical Surgery, illustrated in the Treatment of Morbid Growths within the Larynx." From 1880 to 1884 he published the "Archives of Laryngology," a quarterly. He was the first to demonstrate and teach, in America, the use and value of the laryngoscope in diagnosis and treatment.

Frelinghuysen, Frederick Theodore, an American jurist, born in Millstone, N.J., Aug. 4, 1817; died in Newark, N. J., May 20, 1885. His grandfather was an officer in the Revolutionary army, a member of the second Continental Congress, and United States Senator; his uncle, Theodore, was United States Senator and President of Rutgers College. He was graduated at Rutgers College in 1836, and was admitted to the bar in 1839. He speedily acquired a large practice, and obtained wide reputation. He took an active part in politics, and belonged to the Whig and later to the Republican party. He was a delegate to the Peace Congress in 1861. The same year he was appointed Attorney-General by Gov. Olden, and in 1866 he was reappointed by Gov. Ward. On the death of Senator W. Wright, in 1866, Mr. Frelinghuysen was appointed by the Governor to fill the vacancy in the United States Senate, and he took his seat Jan. 24, 1867. His appointment was confirmed by the New Jersey Legislature, which also elected him to fill the remainder of the deceased senator's term, this expiring March 4, 1869. While in the Senate he served on the Judiciary, Naval Affairs, and Claims Committees. In the contest that arose with President Johnson, he sustained the views of his party, and was chosen to reply to Johnson's last annual message. In July, 1870, President Grant appointed Mr. Frelinghuysen Minister to England, in place of J. L. Motley, recalled. Senators Sumner and Wilson opposed his confirmation, on the ground of the indignity done to Mr. Motley. The Senate confirmed the appointment by a very large vote; but Mr. Frelinghuysen, in view of the circumstances, declined the office. In 1871 he was again elected United States Senator, and faithfully discharged his duties for the full term of six years. He was chairman of the Committee on Agriculture, and also a member of the Foreign Affairs, Finance, Judiciary, and Railroad Committees. In December, 1876, he was appointed on the select committee to inquire into the powers of each house of Congress in examining the electoral vote for President; and when the Electoral Commission was appointed, in January, 1877, he was a member of it. On leaving the Senate, at the expiration of his term, Mr. Frelinghuysen resumed his law practice, while retaining his interest in politics. He warmly supported Garfield's nomination for the presidency, and in December, 1881, when Mr. Arthur had taken the place of the murdered President, Mr. Frelinghuysen was appointed Secretary of State. This office he retained until the end of Arthur's administration, meeting with general approval of his course. Mr. Frelinghuysen was a man of fine presence and courtly manners, and was also an earnest Christian.

Gaillard, Edwin Samuel, an American physician, born near Charleston, S. C., Jan. 16, 1827; died at Ocean Beach, N. J., Feb. 2, 1885. He was graduated at the University of South Carolina in 1845, and at the Medical College in Charleston in 1854. He went to Florida and began practice; but after a few years he spent some months in New York, and then went abroad for a year. In 1861–'65 Dr. Gaillard was in the Confederate service. On the return of peace he resumed practice in Richmond, but after three years he removed to Louisville, Ky. He founded the "Richmond Medical Journal" in 1866, which, after his removal to Louisville, he published under the title of the "Richmond and Louisville Medical Journal." In 1874 he established the "American Medical Weekly." He was Dean of the Kentucky School of Medicine. He had an office in New York, where he published "Gaillard's Medical Journal."

Garrison, Cornelius K., an American financier, born at Garrison's, on the Hudson river, N. Y, March 1, 1809; died in New York city, May 1, 1885. His early advantages, in the way of education, were slight, but he was industrious and energetic. For a while he was occupied on a Hudson river steamboat; then, in New York, he studied architecture and civil engineering; and, having become proficient in this line, he obtained a place in Canada, where his services and ability were duly recognized. His next movement was to the Southwest, where he became prominent in connection with navigation on the Mississippi river, and began to acquire a fortune. Mr. Garrison was one of those interested in the California movement in 1849. He established a bank at Panama, which was very successful, and in 1852 became agent of the Nicaragua Steamship Company. For the next seven years he was in the forefront of active and vigorous men in California. He received a salary of $65,000 per annum from the steamship company, and about $25,000 additional from various insurance companies. He was chosen Mayor of San Francisco, and discharged his duties with vigor and success. His two favorite schemes were the establishment of a steamship line from the United States to China, Japan, and Australia, and the construction of a railroad across the American Continent, and he frequently urged these measures upon public attention. In 1859 he removed to New York city, and entered upon his career as a financier and speculator. Being largely connected with steamship operations, he obtained the honorary title of "commodore," which was quite commonly attached to his name. During the war Mr. Garrison generously and liberally aided the Government with his means. He was very largely interested in the Pacific Railroad of Missouri, which, becoming embarrassed during the panic of 1873, was sold under foreclosure in 1876. The road was reorganized and developed into what is now known as the Missouri Pacific system, and Garrison was elected president. A famous suit at law arose out of this reorganization, known as the Marié-Garrison suit, which occupied the courts for eight or ten years before it was finally settled. The last year of his life was disturbed with financial troubles; but these were in a measure removed, and he expected to renew active business, when an attack of paralysis suddenly brought his long career to its close.

Gilbert, Rufus H., an American physician and inventor, born in Guilford, N. Y., about 1830; died in New York city, July 10, 1885. He served an apprenticeship with a manufacturing firm in Corning, N. Y., and then studied medicine with Dr. Willard Parker, of New York city, and was graduated from the College of Physicians and Surgeons. After this he returned to Corning, was successful in the practice of his profession, and married a daughter of Chief-Justice Maynard, of the New York Supreme Court. At the outbreak of the civil war he joined the Duryea Zouaves as a surgeon, and went through the war, performing at the battle of Big Bethel the first surgical operation that was made under fire during the struggle. He was subsequently made Medical Director and Superintendent of the United States Army Hospitals. His health becoming impaired, he gave up active practice, and became Assistant Superintendent of the New Jersey Central Railroad. While thus occupied, he was led to study the question of rapid transit. His first notion was a pneumatic tube, which was afterward worked out into the present elevated-railroad system. The Sixth Avenue road in New York was known as the Gilbert Elevated Railroad, and he was at first a large holder of the stock. This passed out of his possession, and he charged his former associates with dealing fraudulently toward him.

Gorringe, Henry H., an American naval officer, born in the island of Tobago, West Indies, Aug. 11, 1840; died in New York city, July 6, 1885. He was a son of an English clergyman, and came while a mere youth to the United States, where he entered the merchant marine service. He enlisted in the Union service before the mast in July, 1862, was appointed master's mate, and joined the Mississippi squadron under Porter, became acting ensign, was made acting master, and in 1865 was promoted to the post of acting volunteer lieutenant. He took part in nearly all the important battles of the Mississippi squadron, and was promoted each time for gallant and meritorious conduct. He was promoted to be lieutenant-commander, July 10, 1865. When the Khedive of Egypt, Ismail Pasha, offered to present an obelisk to the United States in 1879, and the famous monolith, commonly called Cleopatra's Needle, was fixed upon, Lieut. Gorringe was charged with the task of transporting it to America. This tested to the utmost his ability as an engineer, but he proved himself equal to the situation. He purchased an iron steamer from the Egyptian Government, fitted it for the reception of the obelisk, and carried it safely across the Atlantic. The obelisk arrived in New York July 20, 1880, and now stands in Central Park. (For a description and full particulars respecting the obelisk, see "Annual Cyclopædia" for 1884, pp. 595–600.) He was twenty-one years in the naval service, and held several important places. From 1869 to 1871 he commanded the Portsmouth in the South Atlantic squadron. He was stationed at the Hydrographic Office, Washington, 1872 to 1876, and was sent with the "Gettysburg" for special service in the Mediterranean from 1876 to 1878. After his successful feat in the matter of the obelisk, he saw but little service in the navy, but, resenting certain action on the part of the Secretary of the Navy, he resigned and entered upon a vast project in connection with the American Ship-building Company, which proved a failure. Some months before his death he met with a severe injury to his spine, in jumping from a railway train while it was in motion, and from this injury he never recovered.

Grier, William N., an American soldier, born in Pennsylvania in 1812; died at Napa Springs, Cal., July 9, 1885. He was graduated at West Point in 1835, was appointed brevet second lieutenant of the First Dragoons, and for several years was engaged in frontier duty in the West and Southwest. When the Mexican War broke out, he entered upon active service, and was brevetted major for gallant and meritorious conduct in the battle of Santa Cruz de Rosales, March 16, 1848. During the two years following he took part in the expedition against the Apache Indians, and was wounded in the skirmish at Too-koon-kurre Butte, Nov. 17, 1849. Subsequently he was in active service on the Pacific coast and in the far Northwest. In 1861–'62 he served as acting inspector-general of the Army of the Potomac, and commanded the first regiment of cavalry in the Virginia Peninsular campaign. He was at the siege of Yorktown, the battle of Williamsburg, where he was wounded, at the battle of Gaines's Mill, and through the seven days. Afterward he served successively as superintendent of the volunteer recruiting service in the States of Ohio, Iowa, and Pennsylvania. He was brevetted colonel, May 5, 1862, for gallantry at the battle of Williamsburg, and brigadier-general, March 13, 1865, for meritorious service during the war. At his own request, he was placed on the retired list Dec. 15, 1870.

Grinnell, Joseph, an American merchant, born in New Bedford, Mass., Jan. 18, 1789; died there, Feb. 7, 1885. He was the second son of Cornelius Grinnell, shipmaster, and an elder brother of Henry and Moses H. Grinnell. He came to New York and with Mr. Fish established in 1815 the house of Fish & Grinnell. This firm continued till 1825, when Mr. Fish retired, and Henry and Moses entered into partnership with their brother. Three years later the elder brother retired, and soon afterward Robert B. Minturn entered the house, the firm being known as Grinnell, Minturn, & Co. Joseph Grinnell resided at New Bedford for fifty-six years, and was President of the Marine

Bank, the Wamsutta Mills Company, and the New Bedford and Taunton Railroad. From 1843 to 1851 he represented his district in Congress. He was twice married, but had no children. He adopted as his daughter Cornelia Grinnell, a niece, who became the second wife of Nathaniel P. Willis.

Hendricks, Thomas A., Vice-President of the United States, died Nov. 25, 1885. (For sketch and portrait, see Annual Cyclopædia for 1884.)

Hotchkiss, Benjamin B., an American inventor, born in Connecticut in 1830; died in Paris, France, Feb. 14, 1885. He had very few early advantages, served in Sharpe's rifle-factory as a machinist, and later went into the employ of Col. Samuel Colt, whom he assisted in perfecting the revolving pistol. About 1860 he became a resident in New York city, and during the draft-riots he was placed in charge of the arsenal. His first invention was what is known as the Hotchkiss magazine-gun, which was subsequently adopted by the United States Government for troops in the West, and later for the naval service. He next applied the Colt principle to breech-loaders, and his system was largely adopted by gun-manufacturers in Europe as well as in America. Mr. Hotchkiss was also the inventor of the machine-gun that is especially designed for use in the rigging of vessels. The Hotchkiss guns were adopted by Russia, France, and other European Governments. Mr. Hotchkiss made also various improvements in heavy ordnance and projectiles. Fifteen years ago he went to Paris and founded a gun-factory. At the time of his death he was about to establish a factory in England, the British Government having adopted some of his improvements in heavy ordnance.

Huntington, William Henry, an American collector, born in Norwich, Conn., May 30, 1820; died in Paris, Oct. 1, 1885. He went to Europe in 1858, and for twenty years was the correspondent of the "New York Tribune" and the friend and associate of Louis Blanc, M. Clemenceau, and other prominent Frenchmen. Without ceasing to be an American, he was more than half a Frenchman at heart. He gave away a large part of his income. He voluntarily remained in Paris during the sieges of 1870–'71, that he might in some measure relieve the poor of his own quarter. Clemenceau, who was at the time Mayor of Montmartre, where Huntington lived, writes: "During the long months of the siege, not a week passed that Huntington did not visit the mayor with his hands full of gold and bank-notes, to be used in the best interests of France and of the republic. The sole condition of his gifts was that his name should be kept absolutely secret. It is only to-day that we are permitted to disclose the services he rendered to the city he loved so ardently." Huntington's large and valuable collection of miniatures, bronzes, and engravings of Franklin, Lafayette, and Washington, was bequeathed to the Metropolitan Museum of Art, New York, where it may now be seen. It is the largest collection of its kind in the world, and represents the result of a quarter of a century's search for portraits of every description of those three illustrious men.

Jackson, Helen, an American author, born in Amherst, Mass., Oct. 18, 1831; died in San Francisco, Cal., Aug. 12, 1885. She was a daughter of N. W. Fiske, Professor of Greek in Amherst College, and received her education at the female seminary in Ipswich, Mass., and at the school of the Rev. J. S. C. Abbott, in New York city. She married Major Edward B. Hunt, who was killed in October, 1863, while experimenting with submarine apparatus at Brooklyn Navy-Yard. Their only child was also taken away, within a year or two. Mrs. Hunt resided for several years at Newport, R. I., and, after her husband's death, began to write for periodicals under the pen-name of "H. H." In 1876 she married William S. Jackson, a banker of Denver, Col. President Arthur appointed her a special commissioner to examine into the condition of the mission Indians of California, and some of her latest literary work was a series of articles on southern California, Oregon, and Washington Territory. Her writings include "Verses," "Bits of Talk," "Bits of Travel," "Nelly's Silver Mine," "Letters from a Cat," "Mammy Tittleback and her Family," and "Ramona." The "Saxe Holm" stories, about which so much factitious interest was created by ingenious advertising, have been attributed to her. For a commonplace writer she enjoyed a pretty wide, though probably ephemeral, reputation.

Kingsley, William C., an American contractor, born in Franklin County, N. Y., in 1833; died in Brooklyn, Feb. 21, 1885. His early years were spent on a farm, and for a time he taught school. He then took service in work connected with railroads, tunnels, etc., and superintended railroad work in Illinois and Wisconsin. In 1858 he went to Brooklyn, N. Y., where, in company with A. S. Keeney, he made a contract to build the Brooklyn Water-Works. He became convinced of the feasibility of a bridge from Brooklyn to New York as early as 1865, and succeeded in interesting wealthy men in the scheme. The New York Bridge Company was organized in 1867, with a nominal capital of $5,000,000, of which Kingsley and Keeney took $110,000, and afterward held $300,000. Mr. Kingsley was made superintendent of the work, and was paid 15 per cent. on the cost. In 1875 the bridge was placed in charge of a board of trustees, of whom Mr. Kingsley was one during the remainder of his life. In 1882 he succeeded Henry C. Murphy as president of the board, and saw the bridge completed and formally opened, May 24, 1883. Mr. Kingsley amassed great wealth, which he left to his widow, two sons, and two daughters.

Lay, Henry Champlin, an American clergyman, born in Richmond, Va., Dec. 6, 1823; died in Baltimore, Md., Sept. 17, 1885. He was graduated at the University of Virginia in 1842, and at the theological seminary at Alexandria in 1846. He was ordained July 10, 1846, served six months in Emmanuel Church, Lynnhaven parish, Va., and in 1847 took charge of the Church of the Nativity, Huntsville, Ala. Dr. Lay was consecrated Missionary Bishop of the Southwest at the meeting of the General Convention in Richmond, Oct. 23, 1859. During the war he acted as general chaplain in Georgia and Tennessee. In 1865, in conjunction with Bishop Atkinson, of North Carolina, he was influential in bringing about a return of the Southern bishops to harmonious action with the bishops assembled in that year in Philadelphia. In 1868 the Diocese of Maryland was divided, and a new diocese was formed, consisting of that part of the State east of Chesapeake Bay and the Susquehanna river. The new diocese adopted the name of Easton, and elected Bishop Lay diocesan, who was transferred to this field of labor April 1, 1869. Bishop Lay made numerous contributions to church literature. His "Letters to a Man bewildered among many Counselors," "Studies in the Church," "Tracts for Missionary Use," etc., are well known.

Little, James Lawrence, an American physician, born in Brooklyn, N. Y., in 1836; died in New York city, April 4, 1885. He studied medicine under Dr. Willard Parker, and at the College of Physicians and Surgeons in New York, served six months as assistant physician in Bellevue Hospital, and was graduated at the college in March, 1860. He was then appointed junior assistant at the New York Hospital, and subsequently became senior assistant and then house-surgeon. Two years later he was made surgeon in charge of the Park Barracks. In 1863 he was appointed clinical assistant to Dr. W. Parker, in the College of Physicians and Surgeons, and in the spring following delivered a course of lectures on fractures and their treatment. Dr. Little delivered lectures of this kind until 1868, when he was appointed lecturer on operative surgery and surgical dressings, a post that he held for more than ten years. In 1875 he accepted the chair of Surgery in the University of Vermont, but continued to reside in New York. He was appointed consulting surgeon in the Northwestern Dispensary, and attending surgeon to both St. Luke's and St. Vincent's Hospitals. He was a member and fellow of numerous medical societies, and a frequent contributor to medical journals. He was regarded as one of the most able and accomplished operators in difficult cases that America has produced, and his publications on professional topics are held in high estimation. He freely gave his services to the national Government during the civil war. In the spring of 1864 he joined in the movement in New York city toward sanitary reform, and was instrumental in the formation of the present Board of Health in the metropolis.

Livingston, John W., an American naval officer, born in New York city, May 22, 1804; died there, Sept. 10, 1885. He was a son of William Turk, a surgeon of the navy. The admiral's mother was a Livingston, and by an act of the Legislature he assumed her name. He was appointed midshipman March 4, 1823, and served in that capacity in the sloop-of-war "Ontario" and the frigate "Delaware" in the Mediterranean, until the close of the "piratical war," when he was transferred to the frigate "Constitution," and saw service in the West Indies. On June 21, 1832, he was commissioned lieutenant, and made a voyage around the world in the frigate "Columbia," during which Sumatra was visited, and the piratical power in that island broken. He took an active part in the Mexican War, in 1855 was commissioned commander, and in the following year was sent in command of the ship-of-war "St. Louis" to the coast of Africa. In July, 1862, he was promoted to the rank of commodore, and after the evacuation of Norfolk by the Confederates he took command of the navy-yard. In 1864 he was ordered to the command of the naval station at Mound City, Ill. He took charge of the sale of the condemned Government vessels after the war, and more than $13,000,000 passed through his hands. For the thoroughness and fidelity with which he discharged this important trust he received the thanks of the Navy Department. He was commissioned rear-admiral on May 26, 1868, and was retired in 1874.

Lunt, George, an American author, born in Newburyport, Mass., Dec. 31, 1803; died in Boston, Mass., May 17, 1885. He was graduated at Harvard College in 1824, was admitted to the bar in 1831, and practiced in his native town. After serving in the Legislature, Mr. Lunt, in 1848, removed to Boston, and the next year was appointed United States Attorney for the District of Massachusetts. When President Pierce came into office (1853), Mr. Lunt tendered his resignation, and resumed private practice. From 1857 to the close of 1862 he edited the Boston "Courier." His works include "Poems" (1839), followed by "The Age of Gold, and other Poems" (1843); "Lyric Poems, Sonnets, and Miscellanies" (1854); "Eastford, or Household Sketches," a novel (1855); "Julia, a Poem" (1855); "Three Eras of New England" (1857); "Radicalism in Religion, Philosophy, and Social Life" (1858); and "Origin of the Late War," in which he threw the blame upon the North (1865). In 1883 he brought out a revised edition of his poetical works.

McCullough, John Edward, an American actor, born in Coleraine, Ireland, Nov. 2, 1837; died in Philadelphia, Pa., Nov. 8, 1885. His father was a small farmer. John came to America in 1853, worked in a furniture-factory, studied Shakespeare, and in 1857 made his *début* in Philadelphia as Othello, with an amateur company. He soon afterward obtained an engagement at the Arch Street Theatre at four dollars a week, attracted Forrest's attention, was engaged to support him, and received much advice and assistance from that tragedian. When Forrest died, in 1872, most of his manuscript plays came into the possession of McCullough, who gradually worked his way to high rank on the American stage, playing Jack Cade, Spartacus, Virginius, Richard III, and other high-tragedy parts.

McDowell, Irvin, an American soldier, born near Columbus, Franklin County, Ohio, Oct. 15, 1818; died in San Francisco, Cal., May 5, 1885. His early training was received in part at the Collége de Troyes, France. He was graduated at West Point in 1838, was made brevet second lieutenant of the First Artillery, and served on the Niagara frontier during the Canadian border disturbances. Thence he was transferred to the Maine frontier. In July, 1838, he was made second lieutenant, and in October, 1842, first lieutenant. From 1841 to 1845 he was on service at West Point as assistant instructor of infantry tactics, with the rank of adjutant in 1845. In October of that year he went to Mexico as aide-de-camp to Gen. Wool, and by gallant and meritorious conduct at Buena Vista (February, 1847) won the rank of brevet captain. He was soon after adjutant-general in Wool's division of the army of occupation. The next year he was assistant adjutant-general at the War Department, and for three or four years he was stationed in Washington. He was made brevet major in 1856, was for a while in the Department of Texas, and spent a year in Europe on leave of absence. At the outbreak of the civil war, in 1861, McDowell was a major on Gen. Scott's staff, and served as inspector of troops. He organized the volunteers into tolerably effective forces, and in May was appointed brigadier-general and assigned to the command of the Department of Northeastern Virginia and the defenses of the capital on that side. Two months later he entered upon the campaign that ended disastrously at the first battle of Bull Run, July 21, 1861. Gen. McDowell was severely judged at the time for lack of success, and was pronounced by many incompetent for the position he held. But investigation showed that he had planned well and fought well, and only missed success because Gen. Patterson, who should have held the army of Johnston, and was instructed to do so, failed in his plain duty. When Gen. McClellan was given the organization of a new army, McDowell was placed in command of one of its divisions, and, having been raised to the rank of major-general of volunteers in March, 1862, was placed at the head of the First Corps. In August he was assigned to a like position in the Third Corps. While the Army of the Potomac was driving back Magruder and keeping Johnston and Lee in check, McDowell was retained on the Rappahannock to guard Washington. When an opening seemed to offer for redeeming his military reputation, he was sent off after Stonewall Jackson, who was causing trouble in the Shenandoah Valley. Unfortunately for McDowell, he met with an accident in the saddle, which rendered him helpless for a week, and the Government gave his command to Pope. He served under this latter general, and was engaged at Cedar Mountain and the second Bull Run. On Sept. 5, 1862, he was relieved of his command. In 1863–'64 he was president of a court for investigating cotton frauds, and of the board for retiring disabled officers. In July, 1864, he was placed in command of the Department of the Pacific Coast; in June, 1866, of the Department of California; and in 1868 of the Department of the East. In 1872 he was assigned to the Division of the South, and on Nov. 25 of the same year was made a major-general in the regular army. He had received this rank by brevet in 1865 for services at the battle of Cedar Mountain. He was retired from service Oct. 15, 1882. During the latter years of his life Gen. McDowell resided in San Francisco. He was an excellent French scholar, and was one of the best-educated men in the army.

McQuade, James, an American soldier, born in Utica, N. Y., April 27, 1829; died there, March 25, 1885. He was educated at a Roman Catholic institution in Montreal, Canada, where he became an excellent Latin and French scholar. On returning to Utica, he studied law, but, having no taste for the profession, he went into banking, and thence into politics. He was appointed Assistant Clerk of the Assembly in 1851, and served in that place for five years. He was elected a member of the Assembly on the Republican ticket, in 1859, but served only one term. At the outbreak of the civil war, he was captain of the Utica Citizens' Corps, which enlisted as a company of volunteers under the first call for troops. In April, 1861, while the company was in Albany, the Fourteenth Regiment was formed, and Capt. McQuade was chosen colonel. He was at the battle of Malvern Hill, where, in consequence of the death of other colonels, he took command of the brigade, and held it to the end of his term of service, about eighteen months. Although ill at the time of the battle of Chancellorsville, Gen. McQuade insisted upon doing duty, participated in the fight, and fell from his horse exhausted. He was brevetted both brigadier and major-general by President Johnson, and was selected department commander of the Grand Army of the Republic in New York in 1879. Gen. McQuade served in various civic capacities, and was an active politician.

Madden, Edward M., an American manufacturer, born in Crawford, Orange County, N. Y., Feb. 1, 1818; died in Middletown, N. Y., July 17, 1885. His parents being very poor and the family large, he had almost no advantages in early life, and began to work for a living when only ten years old. Nevertheless, by industry and perseverance he acquired a fair education. At the age of fourteen he was apprenticed to a tinsmith, and at twenty-one he opened a tin-shop in Middletown, and in a few years made money enough to go into business with Mr. E. P. Wheeler in establishing the Orange County Foundry and Machine-Shop. This proved very remunerative, and in 1853, in company with others, he established the Monhagen Saw Works, one of the largest establishments of the kind in the United States. Four years later he organized the Madden and Cockayne File Works, and in 1866 the Middletown Horse-Nail Company, of which latter he was president and general manager. Originally he was a Democrat in politics, but he broke with the party on the Kansas-Nebraska issue. In 1855 he was the Free-Soil candidate for State Senator, and was elected. He was actively concerned in founding the Republican party. In 1871 he was nominated by the Republicans for Senator, in a district largely Democratic, and was elected by an immense majority. He was elected to this office for four successive terms, and originated and carried through several very important measures, in regard to the prisons, canals, and other institutions of the State, election returns, etc.

Marston, John, an American naval officer, born in Boston, Mass., June 12, 1795; died in Philadelphia, April 7, 1885. He was appointed midshipman in the navy, April 15, 1813, and was on duty during the second war with England. He was appointed lieutenant in 1825, and served in the Pacific squadron in 1827–'29, and again in 1833–'34. In 1841 he received his commission as commander, and in 1850 was assigned to duty on the coast of Africa. Capt. Marston was in charge of the Philadelphia Navy-Yard in 1853–'55. He commanded the "Cumberland," of the Brazil squadron, in 1861, was made commodore the next year, and was in command of the "Roanoke" in Hampton Roads when the "Merrimac" made its destructive raid there. After the war was over, he was in command at the navy-yards of Portsmouth, Philadelphia, and Key West, and was for many years one of the lighthouse inspectors.

Merrick, Richard T., an American lawyer, born in Charles County, Md., Sept. 18, 1828; died in Washington, D. C., June 23, 1885. He went to the Mexican War. On his return he began the practice of law, and also became a member of the Maryland Legislature. He next went to Chicago, in 1864 removed to Washington, D. C., and during the twenty years following he held a commanding position in his profession, and was engaged as counsel in some of the most important cases before the bench of the District of Columbia, as well as the Supreme Court of the United States. He was one of the counsel before the Electoral Commission, and was engaged in prosecution of the "Star-Route" cases. He was lecturer on constitutional law in Georgetown University Law School.

Mulford, Elisha, an American author, born in Montrose, Pa., Nov. 19, 1833; died in Cambridge, Mass., Dec. 9, 1885. He was graduated at Yale College in 1855, and afterward studied in Germany, became a presbyter in the Episcopal Church, and for a few years was a pastor at Darien, Conn., and at Orange, N. J. In 1880 he became a professor in the Episcopal Theological Seminary at Cambridge, Mass. He published in 1870 an able and learned treatise entitled "The Nation: the Foundations of Civil Order and Political Life in the United States," the object of which was "to ascertain and define the being of the nation in its unity and continuity." This work has slowly won its way to a recognition of its high importance and value. In 1881 he published "The Republic of God."

Nichols, George Ward, an American author, born in Boston in 1834; died in Cincinnati, Sept. 15, 1885. For several years he resided in New York, engaged in painting and in writing art criticisms for the daily press. He was one of Gen. Sherman's staff-officers in the march to the sea. He married a daughter of Nicholas Longworth, of Cincinnati, and for sixteen years resided in that city, where he founded the College of Music. He published "The Story of the Great March," "The Sanctuary," and "Art Education."

Parsons, Henry Betts, an American chemist, born in Sivas, Asia Minor, Nov. 20, 1855; died in Tucson, Arizona, Aug. 21, 1885. He was the son of a missionary. He was graduated at the School of Pharmacy of the University of Michigan in 1876, and for two years he had charge of the pharmaceutical laboratories, and delivered lectures at Ann Arbor. In 1878 he was appointed special assistant in the chemical division of the Agricultural Department under Prof. Peter Collier at Washington. While he was engaged in this department, his "Method for the Proximate Analysis of Plants" was published, and it at once received the commendation of leading chemists. It appeared in all of the prominent chemical journals of the world, and was universally adopted, and is incorporated in the text-books treating on that subject. The professorship of Materia Medica and Botany in the National College of Pharmacy was accepted by him, and his various occupations at Washington continued until late in 1881, when he removed to New York, and became the chemist-in-chief of a large drug house, whose entire laboratory was built and equipped under his personal supervision. Failing health, largely caused by overwork, compelled his resignation in May, 1884, and he then became editor of the "Druggists' Circular." But his vitality gradually gave out until his death. His published papers are many and valuable. They include analyses of various plants, reports on sorghum, with thousands of analyses, exhaustive communications on berberina, opium, quinine, nitrous ether, the oleates, etc. He was also one of the Committee of Revision of the "United States Pharmacopœia," and a trustee of the New York College of Pharmacy.

Prime, Rufus, an American merchant, born in New York city, in 1805; died in Huntington, L. I., his country residence, Oct. 15, 1885. He was a son of Nathaniel Prime, head of the great banking-house of Prime, Ward, & King, and was graduated at Yale College. He afterward engaged in business with three friends, the firm being Christmas, Livingston, Prime, & Costar. After his father's death, in 1843, he devoted himself to the care of the large estate. He was familiar with several languages, and had literary tastes.

Shaw, Henry W., an American humorist, born in Lanesborough, Mass., in 1818; died in Monterey, Cal., Oct. 14, 1885. At the age of fifteen he went to the West to seek his fortune. He was a hand on steamboats on the Ohio river, then a farmer, occasionally an auctioneer, and led a somewhat unsettled life for several years. In 1858 he settled in Poughkeepsie, N. Y., and went into business as an auctioneer. His first contribution to current literature was published in 1863, and bore the pen-name of "Josh Billings," by which he was ever after known. His writings are mainly in the form of homely maxims, which contain a great deal of shrewd sense as well as genuine humor. They were made especially noticeable by a quaintness imparted by phonetic spelling. Most of them were produced in short installments for a New York weekly paper. He lectured throughout the country, and published four volumes of his sketches, besides an annual comic almanac. Francis S. Smith published a life of him in New York in 1883.

Smillie, James, an American engraver, born in Edinburgh, Scotland, in 1807; died in New York city, Dec. 5, 1885. He was apprenticed at first to a silver-engraver, who soon died, and afterward was placed with an engraver of pictures. At the age of fourteen he emigrated with his father and brothers to Quebec, and worked there with them as a jeweler. Lord Dalhousie was struck with his skill, and sent him to London to study engraving with the best masters of that art; but he failed to make an engagement there, worked for a time in Edinburgh, returned to Quebec, and finally, in 1829, settled in New York, where he spent the remainder of his life. He became a member of the National Academy in 1851. He did a great deal in the way of bank-note engraving, but was especially eminent as a landscape-engraver, being considered the best in America. He engraved Cole's series entitled "The Voyage of Life," Bierstadt's "Rocky Mountains," Chapman's "Bay and Harbor of New York," Weir's "Evening in the New York Highlands," Kensett's "Mount Washington," Cropsey's "American Harvesting," Huntington's "Land of the Cypress," and many other famous pictures. His two sons—James D. and George H. Smillie—are well-known artists.

Tyng, Stephen Higginson, an American clergyman, born in Newburyport, Mass., March 1, 1800; died at Irvington-on-the-Hudson, Sept. 4, 1885. He was graduated at Harvard College in 1817, studied theology two years later, and in 1821 entered the Episcopal ministry. He preached for two years in Georgetown, D. C., then for six years in Prince George's County, Md., in 1829 became rector of St. Paul's Church in Philadelphia, in 1833 of the Church of the Epiphany in New York, and in 1845 of St. George's Church in that city. This pastorate he held till 1878, when he was retired as pastor emeritus. His published works include "Lectures on the Law and the Gospel," "Recollections of England," "The Captive Orphan," "Forty Years in Sunday Schools," and "The Feast Enjoyed." He edited for several years the "Episcopal Recorder" and the "Protestant Churchman."

Warner, Susan, an American novelist, born in New York in 1818; died, March 18, 1885. She was a daughter of Henry W. Warner, who wrote "The Liberties of America" and other works. Under the pen-name of Elizabeth Wetherell, she published in 1850 her first story, "The Wide, Wide World," which she only intended as a juvenile, but which attained great popularity and was read by all classes on both sides of the Atlantic. Her subsequent works include "Queechy," "The Law and the Testimony," "The Hills of the Shatemuc," "The Old Helmet," "Melbourne House," and numerous juvenile stories, some of them written in collaboration with her sister Anna. Some of her works have been translated into several of the Continental languages. About 1860 the sisters purchased Constitution Island, in the Hudson, near West Point, and made their home there.

Williams, William R., an American clergyman, born in New York city, Oct. 14, 1804; died there, April 1, 1885. He was graduated at Columbia College in 1822, studied law, and practiced for a short time. He then became a Baptist minister, and in 1831 accepted the pastorate of the Amity Street Church (then just founded), which he retained till the end of his life. He was a profound scholar, and made a remarkable collection of books, which filled his house from bottom to top. His published works include "Religious Progress," "Lectures on the Lord's Prayer," "God's Rescues," and "Miscellanies."

Wright, Elizur, an American abolitionist, born in South Canaan, Conn., Feb. 12, 1804; died in Medford, Mass., Nov. 22, 1885. When six years of age, he removed with his family to Tallmadge, O., where he remained until 1822, working upon a farm and studying at an academy conducted by his father. His home was often the refuge of escaped slaves, and he acquired strong anti-slavery opinions, contending for abolition upon the ground that the bondage of the negro was an injustice and harm to the majority of white men, and interfered with the natural right of man to use his hands in labor for himself. He entered Yale College, paying his expenses largely by tutor-ing other students, was graduated in 1826, and took charge of an academy at Groton, Mass. In 1829, the year of his marriage, he accepted a professorship of Mathematics and Natural Philosophy in Western Reserve College, at Hudson, O. Here he wrote much in opposition to slavery, and in 1833 removed to New York city, to edit the "Emancipator." He was then made secretary of the American Anti-Slavery Society, and edited in 1834–'35 a paper called "Human Rights," and in 1835–'38 the "Quarterly Anti-Slavery Magazine." Through his continued opposition he incurred the enmity of the pro-slavery people, and when he appeared at one of their meetings he was threatened with death, driven away, and pursued to his home. He was once besieged in his house in Brooklyn by a mob, and an unsuccessful attempt was made to kidnap and remove him to South Carolina. In 1838 he went to Boston, and in April, 1839, became editor of the "Massachusetts Abolitionist." He then wrote for the "Emancipator" and the "Chronicle," and in 1846 established the "Chronotype" newspaper, which was not exclusively devoted to abolition. This he conducted till it was merged in the "Commonwealth" (1850), of which also he was for a time the editor. He was then occupied for a year (1852) in preparing for the Union Mutual Life-Insurance Company, of Boston, certain mathematical tables, and afterward devoted much of his time to the study of insurance. He agitated successfully, in 1858, for reform legislation bearing upon insurance methods, and was then made Insurance Commissioner of Massachusetts, gaining a national reputation as an authority upon all branches of American underwriting. After the close of his term of office (1866) he devoted himself to mathematical work, the consideration of the labor question, industrial education, and the currency, writing occasionally for the press upon current topics. He was in favor of free trade, and was an advocate of woman suffrage. He published in Boston, in 1841, a translation, in verse, of La Fontaine's "Fables" (2 vols. 8vo), giving his personal attention to the sale, and in 1866 "A Curiosity of Law." He also published many pamphlets and reports. His wife died in 1875, and few of his eighteen children survive him.

OBITUARIES, FOREIGN. Abercorn, James Hamilton, Duke of, in the peerage of Ireland, born in London, Jan. 21, 1811; died there, Oct. 30, 1885. He was educated at Harrow and Oxford, and in 1832 married a daughter of the Duke of Bedford. He was Lord Lieutenant of Ireland from 1866 to 1868, under Earl Derby's Administration, and again on the return of the Conservatives to power, in 1874, he was appointed to the same place and held it for three years. The Duke was one of the great Irish landlords, owning 63,557 acres. One of his daughters is the wife of the present Governor-General of Canada. The Duke was one of the most popular peers of his time.

About, Edmond, a French author, born in Dietze, Lorraine, Feb. 14, 1828; died in Paris, Jan. 17, 1885. He bore off many prizes in the Lyceum, and in 1848 won the chief prize for Latin composition, which entitled him to a course at the Normal School at state expense. He became a professor in the French School at Athens. In 1853 About returned to Paris and published a humorous satire on the manners and morals of the Hellenes, entitled "La Grèce contemporaine." The hopes of the Greeks for aggrandizement through the Crimean War were dashed by this amusing exposure of their national foibles. They took their revenge in hissing down a play called "Guillèry," which About produced in 1856. He followed up his attack with the novel of "Le Roi des Montagnes," representing the leaders of the Liberal party in the Athenian Parliament as in league with brigand chiefs. About swallowed his republican principles in order to receive lucrative employment on the official "Moniteur" and other newspapers. His books on Greece attracted the attention of the Emperor, and his *feuilletons* of "Mariages de Paris" made him the favorite author of the Empress. He was accordingly taken into the band of writers who, too irreligious to be received by the Empress, were made the familiars of Prince Napoleon. His style sparkles with witty epigrams and humorous conceits. Some critics rank "Madelon" (1863) as his best work; but "Germaine" (1857) is more popular, and "Trente et Quarante" (1858) and "L'Homme à l'Oreille cassée" are universally preferred for the grotesque and laughable fancies woven into their stories. The success of "The Man with a Broken Ear" was such that the author was encouraged to write the other fantastic tales of "Le Nez d'un Notarie" and "Le Cas de M. Guérin." In 1858 About's brilliant style and satirical gifts were employed by the Emperor in the congenial task of lampooning the Papacy. Napoleon was contemplating the withdrawal of the French garrison from Rome, to engage in war with Austria. For the pamphlet on the "Roman Question" About was decorated with the Cross of the Legion of Honor. He continued his attacks on the Papacy in "Lettres d'un jeune Homme à sa Cousine Madeleine," to publish which the newspaper "L'Opinion Nationale" was founded expressly, until the imperial policy was again changed. In "The New Map of Europe and Prussia" (1860), and a series of editorial articles in the "Constitutionnel," he shadowed forth other phases of the Emperor's policy, and continued to serve Napoleon III with his pen in the vain expectation of political reward for the remaining ten years of the Empire, making enemies in all parties. His drama "Gaëtena" (1862) was damned by reason of the author's unpopularity. Rendered easy in circumstances by his marriage to a wealthy heiress, Mlle. de Guillerville, he wrote with less care and labor. His later novels are "Le Turco" (1866), "L'Infâme" (1867), and "Le Fellah" (1868). In 1868 he joined the newly started "Gaulois," and in 1869 the "Soir." He was arrested by the German authorities in 1872, on his estate in Lorraine, because in a newspaper article he had boasted of having shot a Prussian sentry, but was released by order of Prince Bismarck. After the war he founded the "XIXème Siècle" in conjunction with Francisque Sarcey. In 1884 he was elected an Academician. He left a widow and eight children.

Abt, Franz, a German composer, born in Eilenburg, Dec. 22, 1819; died in Wiesbaden, April 2, 1885. He was educated for the ministry. Adopting the musical profession, he became conductor of choral societies at Zürich, where he composed many part-songs. In 1855 he was appointed conductor of the Brunswick Opera-House. He was a prolific composer of songs that pleased the popular ear by reason of their easy melody.

Alexander Karageorgevitch, Prince, of Servia, born in 1815; died in Temesvar, May 3, 1885. He was the son of Karageorg, the liberator of Servia, who was murdered in 1817, and he and his family pursued with their hatred the Obrenovitch family because Milos Obrenovitch was supposed to have instigated the murder of his father. In 1842, when Michael Obrenovitch was dethroned, he became Prince of Servia and reigned until the Russian party restored Prince Michael. When the latter was murdered in 1868, Alexander Karageorgevitch was accused of instigating the deed. His extradition was refused by the Austrian Government, but he was tried at Pesth and sentenced to eight years' imprisonment. He was pardoned by the Emperor, and lived in retirement.

Alfonso XII, King of Spain, born in Madrid, Nov. 28, 1857; died at El Pardo, a royal residence six miles from Madrid, Nov. 25, 1885. He was the eldest son of the ex-Queen Isabella II, and was expelled from Spain with his mother, whose subjects deposed her in 1868. He accompanied her to Paris, where he resided with her for two years, when he was sent to the Theresianum, or Nobleman's Academy, at Vienna. There he remained three months, when the ex-Queen determined to abdicate formally in her son's favor. His education was continued in France and England until near the close of 1874. During the interregnum that followed Isabella's expulsion, Amadeus, second son of Victor Emanuel and Duke of Aosta, accepted the crown of Spain. He soon became unpopular, and his reign was brief. Repeated insurrections and attempts at assassination followed his accession to the throne, and on Feb. 11, 1873, he abdicated and returned to Italy, having reigned two years and two months. After nearly two years of anarchy and republican rule under Figueras, Castelar, and Serrano, the Prince of Asturias, as he was then styled, was on Dec. 29, 1874, proclaimed King of Spain at Valencia, by Gen. Martinez Campos. A few days later, Alfonso left France, and landed at Barcelona, Jan. 5, 1875. The army at once declared for him, and he assumed command. His first movements against the Carlists were unsuccessful; but he gradually succeeded in improving his position, in winning to his side the various parties, and in harmonizing the conflicting interests of his followers. He succeeded in the spring of 1876 in attacking Don Carlos with a greatly superior force, and in gaining a signal victory. The insurrection was soon completely quelled, and Don Carlos sailed for England, never to return. The war being ended, the young King entered Madrid in triumph, March 20, 1876. Eight days later, there was laid before the Cortes a new Constitution, which was passed in July. One of the chief changes made by this Constitution was the recognition of the right of private worship on the part of non-Catholics. Soon after the close of the Carlist war, Alfonso invited the ex-Queen to Spain, who was received by her son at Santander in July, and in October quietly entered Madrid. The young King's reign was, on the whole, peaceful; good order generally prevailed, and the Cabinet changes were not especially frequent. The Government had a strong support in the Cortes, and during his reign the Cuban insurrection was brought to a close. Many reforms were also brought about. Early in 1877 a decree of general amnesty to the Carlists was issued, and in the following year the King married his cousin, the Princess Maria de las Mercedes (born June 24, 1860), youngest daughter of the Duke of Montpensier. The ex-Queen Isabella was opposed to the marriage, and, finding that she could not prevent it, she took up her residence in Paris, where she associated with Don Carlos. The latter was ordered to leave France. Isabella was at the same time informed that she must not return to Spain, and her pension was stopped. Six months after her marriage, in January, 1878, the young and popular Queen died. On Nov. 29, 1879, Alfonso married the Archduchess Maria Christina of Austria, who had been a playmate of his while at the Royal College at Vienna. A month later an attempt was made to assassinate the young King and his bride. An attempt to kill the King had also been made in October, 1878. Both of the assassins were executed. In September, 1883, he attended the unveiling of a statue of "Germania keeping her Watch on the Rhine," and was commissioned colonel in a Uhlan regiment by the Emperor William. On his return home through Paris, a crowd gathered around Alfonso's carriage, hissed him, and cried out, "Down with the Uhlan King!" President Grévy made a suitable apology. With singular courage and faithfulness the Spanish King visited the plague-stricken districts of his kingdom during the cholera pestilence of 1885. He had been in delicate health for some months; but knowledge of the fact was not made public, and his death, of consumption, accelerated by dysentery, was sudden and unexpected. He was buried with great pomp in the Escurial, the doors of which had not been opened since they received the body of Alfonso's grandfather, Ferdinand VII. By his second marriage the King had two daughters—Mercedes, born Sept. 11, 1880, and Maria Theresa, born Nov. 12, 1882. By his death his eldest daughter became Queen of Spain, with his widow as Queen Regent. (See portrait in "Annual Cyclopædia" for 1883, page 735.)

Ansdell, Richard, an English painter, born in Liverpool in 1816; died in Farnborough, April 20, 1885. His subjects were mostly animals and hunting-scenes, and occasionally out-door historical scenes. Among his best-known paintings are "The Death," "Mary, Queen of Scots, returning from the Chase to Stirling Castle," "The Stag at Bay" and "The Combat," "The Battle of the Standard," "Wolf-slayer," "Turning the Drove," "Buy a Dog, Ma'am?" and "The Water-Carrier," "Goat-herds," and other Spanish subjects.

August, Prince, of Würtemberg, born Jan. 24, 1813; died Jan. 12, 1885. He was a general in the Prussian army, and until his retirement commanded the Army Corps of the Guards garrisoning Berlin.

Aylesford, Heneage Finch, Earl of, an English nobleman, born in February, 1849; died on his cattle-ranch in Texas in January, 1885. He succeeded to the title in 1871. He wasted his property in horse-racing, was separated from his wife in 1882, and settled in Texas.

Beaume, Joseph, a French painter, born in Marseilles in 1798; died Sept. 14, 1885. In 1819 he produced "Eliezer and Naphthali," which made him famous. He painted a large number of historical pieces, among them the "Battle of Lützen," the "Death of the Great Dauphin," "The King drinks"; also "Hagar in the Desert," and other biblical scenes, and a number of portraits, sea-pieces, *genre* paintings, and pastoral subjects.

Becker, Hermann, a German political agitator, born in Elberfeld, Sept. 15, 1820; died in Cologne, Dec. 9, 1885. He became a lawyer, took a prominent part in the revolutionary movement of 1848, and was condemned to imprisonment in a fortress for high treason. When released he settled at Dortmund, which place he represented in the Prussian Diet and in the German Reichstag, where he voted with the Progressist party. Since 1875 he had lived in Cologne, having been elected Chief Burgomaster of that city.

Blakesley, Joseph Williams, Dean of Lincoln, born in London in 1808; died in Lincoln, April 18, 1885. He published a "Life of Aristotle" in 1839, and an edition of Herodotus in 1854; also a book of travel entitled "Four Months in Algeria."

Bohnstedt, Ludwig, a German architect, born in St. Petersburg in 1823; died in Gotha, Jan. 15, 1885. He was appointed court architect at St. Petersburg in 1851, and designed the Monastery of the Resurrection and other public buildings. In 1861 he removed to Gotha. His design for the Berlin Parliament buildings was awarded the first prize in 1872. Among other fine buildings he designed the Cathedral of São Torquato, in Portugal.

Bourget, Ignace, Archbishop of Martianopolis, *in partibus infidelium*, born at Point Levi, opposite Quebec, Oct. 30, 1799; died at Sault au Recollet, near Montreal, June 8, 1885. He was the oldest Roman Catholic bishop in America, and the oldest but one in the world. He was the eleventh son of Pierre Bourget, a farmer. He was ordained priest Nov. 9, 1822, and eleven years later became coadjutor to Mgr. Lartigne; on July 25, Bishop of Telmessa, *in partibus infidelium*, and on the death of Mgr. Lartigne, in 1840, Bishop of Montreal. He resigned the bishopric of Montreal in 1876, and was made Archbishop of Martianopolis. His resignation was attributed to the adverse decision of the Privy Council in the celebrated Guibord case. Guibord was one of the directors of l'Institut Canadien who had been excommunicated by Mgr. Bourget on account of the library's containing forbidden books. Guibord owned a lot in the Roman Catholic cemetery, and on his death permission to bury him in consecrated ground having been refused, legal proceedings were taken and ultimately appealed to the Privy Council in England, which decided in favor of the friends of Guibord, and the interment was accomplished with the assistance of a military escort. The bishop resigned the same year. He was the leader of the Ultramontane party in Canada, and was a prolific author. He instituted the first chapter of titular canons in Canada, and introduced into the Dominion fifteen religious communities devoted to education and charities, and twenty religious societies.

Braamcamp, Anselmo José, a Portuguese statesman, born Oct. 23, 1817; died in Lisbon in November, 1855. He first came into office in 1862 as Minister of the Interior, was appointed Minister of Finance in 1869, and rescued the country from a financial crisis. He succeeded the Duke of Loulé as leader of the Progressist party. In 1879 he was called upon to form a ministry.

Cairns, Hugh MacCalmont, Earl, an English statesman, born in County Down, Ireland, in 1819; died in Bournemouth, April 2, 1885. He was educated at Trinity College, Dublin. He was called to the English bar in 1844, and rapidly obtained a large equity practice. In 1852 he was returned to Parliament for Belfast. In 1858 he became Lord Derby's Solicitor-General. Sir Hugh Cairns began his official career by proposing reforms in the land laws, but his projects were interfered with by a ministerial crisis. At a later period he carried through Parliament the Landed Estates Bill and other measures relieving land-owners from feudal restrictions and legal formalities. When

Lord Derby again came into power in 1866, he made Sir Hugh Cairns Attorney-General. In October of the same year he became Lord Justice of Appeal, and in Febuary, 1867, was created a peer, under the title of Baron Cairns of Garmoyle. He took a prominent part in the discussion of Disraeli's Reform Bill, and introduced into it the principle of cumulative voting. He was the leader in the resistance against the disestablishment of the Irish Church. When Mr. Disraeli took Lord Derby's place at the head of the ministry in February, 1868, Lord Cairns succeeded Lord Chelmsford as Lord Chancellor. When the House of Lords was constrained to yield on the Irish Church question, a compromise was effected in a conference between Earl Granville and Lord Cairns. In 1869 he laid down the leadership of the Conservative party in the upper house, but consented to resume it the following session. In February, 1874, Mr. Disraeli formed his Cabinet, with Lord Cairns as Lord Chancellor again, which office he held until the ministry went out in 1880. He introduced the Irish University Bill. In 1878 he was made Viscount Garmoyle and Earl Cairns. In 1881 he delivered a telling speech against Mr. Gladstone's policy in the Transvaal. Lord Cairns's political and judicial dignities were not allowed to stand in the way of his taking an active part in Sunday-school teaching and in popular meetings for various religious and philanthropic objects. His parliamentary style was that of a lawyer. He never affected the arts of the typical leader of debates; yet his grasp of political subjects was so sure and his eloquence so clear and forcible that the Conservative party wavered between selecting him or Lord Salisbury or Sir Stafford Northcote for its leader. He was succeeded in the earldom by his son, Viscount Garmoyle.

Camphausen, Wilhelm, a German painter, born in Düsseldorf, Feb. 8, 1818; died there, June 19, 1885. The subjects of his paintings were scenes in the Franco-Prussian War and other military events. His paintings of Frederick the Great surrounded by his generals, the Great Elector, and the Emperor Wilhelm at Gravelotte, hang in the Old Palace in Berlin. Some of his earlier works represent scenes in the war of the Cavaliers and Roundheads.

Carl Anton, Prince of **Hohenzollern,** head of the Catholic branch of the family, born Sept. 7, 1811; died June 2, 1885. He succeeded to the principality of Hohenzollern-Sigmaringen Aug. 28, 1848, upon the abdication of his father. After the suppression of the revolution he took the first step that was made toward the foundation of the present German Empire by voluntarily surrendering his dominions to the Prussian crown on April 6, 1850. His hope of thereby promoting the unification of Germany was doomed to immediate disappointment, but an active and honorable career repaid him for the loss of the empty dignity of a *fainéant* sovereign. He became an officer of the Prussian army, and was appointed Military Governor of the Rhine Province and Westphalia. His counsels were sought by the Prussian King, and when the present Emperor became Regent, Prince Anthony was called to the head of the Cabinet in October, 1858. The ministry of the "new era" failed, however, to satisfy the country, and retired in 1862. Prince Anthony then took up his residence at Düsseldorf as Military Governor of the Rhine Province, where he lived in friendly intercourse with artists, and collected antiquities and works of art. When his son Leopold was offered the Spanish crown, he used his paternal authority to induce him to withdraw his candidacy, but the dispatches of "Father Anthony" were only ridiculed in Paris, and did not avert the war. He was the first to perceive the abilities of Bismarck, and wished to secure his appointment as Foreign Minister as early as 1860. His wife, a princess of Baden, and four children, survive him. Leopold, the eldest, is a lieutenent-general in the German army; Charles, the second, is the King of Roumania; Frederick, the third, is a brigade commander in the Guards; Stefanie, the eldest daughter, died in 1859 the wife of Pedro V of Portugal; and Marie is married to a brother of the King of the Belgians. His son Anthony was killed at Königgrätz.

Cashmere, Runbeer Singh, Marajah of, died Sept. 14, 1885. In 1857 he succeeded his father, Golab Singh, a military adventurer whom the British made ruler of the new state of Cashmere, created upon the overthrow of the Sikhs in 1846. Runbeer aided the British in the mutiny. Tyranny was practiced upon his Mohammedan subjects to such an extent that the Indian Government intervened in the famine year of 1879.

Castella, General, a Swiss politician and soldier, died in November, 1885. Escaping from prison, where he was confined for taking part in the insurrection that broke out in Freiburg, his native canton, after the conclusion of the Sonderbund war, he joined the Pontifical army. He served gallantly in the defense of Rome, and after the capture of the city by the Italian troops he went to France, and was given a command in Bourbaki's army, which was driven into Switzerland and surrendered to a Swiss force. Interned until the end of the war, he then joined Don Carlos and held a high place in the insurrectionary army until it was dispersed. He subsequently interested himself in the politics and the military organization of his own country.

Cauer, Carl, a German sculptor, born in Bonn in 1828; died in Kreuznach, April 17, 1885. He was the son of a distinguished sculptor, and in association with his brother Robert maintained an atelier in Kreuznach and one at Rome, and supplied the museum at Berlin with casts from antique sculptures. Among his works are a portrait bust of King Wilhelm IV, a bronze "Olympian Victor," portrait statues of the Austrian Emperor, Prince Metternich, and other Austrian princes, the Schiller statue in Mannheim, "Theseus," the "Dying Achilles," "Hector," "Cassandra," "Psyche," "Brunhild," "Bathing Nymphs," "The Witch," etc. A colossal head of Christ in marble, painted and adorned with gold, designed for the triumphal arch at Bucharest, created a sensation. He treated in the same way "A Nymph," "Cupid," and figures copied from the frieze of the Parthenon. Later works were "The Fountain," "Fisher-Maiden," and "Hector's Parting from Wife and Child." His last production was a statue of President Garfield.

Courbet, Vice-Admiral, commander of the French naval forces in the China seas, born in Abbéville, Somme, June 28, 1827; died on his flag-ship "Bayard," at Makung, the Pescadores Islands, June 11, 1885. He was a brilliant student in the Polytechnic School, and was given a commission as ensign in 1852. He distinguished himself as a lieutenant by his scientific work on the gunnery school-ship "Suffren." As acting captain he was brigade-major of the squadron of the north, and then commanded a vessel in the West Indies. He received the full rank of captain in 1873. He commanded the "Savoie" in the squadron of evolution, and was for a time director of the torpedo-school at Boyardville, where he remained until appointed Governor of New Caledonia. He was made a rear-admiral in 1880. In 1882 he returned to France, and in 1883 was placed in command of the naval division at Cherbourg, and had direction of a series of experiments to test the value of the new types of war-ships. When the Tonquin troubles began, Admiral Courbet was placed in command of the naval forces on the coast of Annam. Immediately upon his arrival he began operations against Hué, bombarded the forts at Thouan-An, and brought about the peace of Hué three days later. When, in consequence of disputes between Gen. Bouet and the civil commissioner, the military commander was recalled, Admiral Courbet was intrusted with the entire direction of the campaign. After the arrival of re-enforcements he advanced upon Sontai. After capturing this, the strongest of the Tonquinese fortresses, he was preparing to continue his victorious campaign, when he was superseded in the military command by Gen. Millot. For his services in Tonquin he was advanced to the rank of vice-admiral and made a Grand Officer of the Legion of Honor. After the rupture that followed the collision at Bac Ninh, Admiral Courbet was ordered to concentrate his forces in the Eastern waters and make reprisals on China. Obtaining by strategy an entrance into the river Min, he bombarded the naval arsenal of Foochow and sank the Chinese fleet in the harbor. He next bombarded Kelung and temporarily occupied the town, and then undertook the difficult task of blockading the Formosan ports. In February, 1885, he sank with torpedoes two men-of-war at Sheipoo (see CHINA). By bombarding the batteries in the Bay of Dome and obtaining control of the Pescadores Islands, Admiral Courbet brought to a close the Franco-Chinese hostilities. His return was eagerly looked forward to by his countrymen, when his death occurred, caused by a bilious attack.

Curtius, Georg, a German philologist, born in Lübeck, April 16, 1820; died Aug. 16, 1885, at Hermsdorf. He studied at Bonn and Berlin, and in 1845 accepted a tutorship in the University of New York. Four years later he went to Prague as Professor of Classical Philology. Since 1862 he had resided at Leipsic as Professor of Classical Philology and co-Director of the Philological Seminary. He wrote treatises on "Comparative Philology, in its Relations to the Classical Languages," "Principles of Greek Etymology," and the "Greek Verb."

Demidoff, Paul Pavlovich, Prince of San Donato, born Oct. 21, 1839; died in Italy, Jan. 27, 1885. He filled several diplomatic and political posts in the Russian service, but was best known as the possessor of iron and gold mines in the Ural, and as a liberal dispenser of charity.

Dennis, John Stoughton, Lieutenant-Colonel, formerly Deputy Minister of Interior in Canada, born in Buttonwood in 1820; died July 7, 1885, in Kingsmere, near Quebec. He was commissioned Surveyor of Public Lands for Upper Canada in 1842, was active in the volunteer movement of 1855, and was appointed to survey the lands in Manitoba when that district was acquired from the Hudson Bay Company, but was recalled because the natives resisted. In 1871 he was appointed Surveyor-General and Deputy Minister of the Interior, and directed the administration of the Dominion lands in Manitoba and the Northwest.

Duprat, Pierre Pascal, a French author, born in Hagetman, Landes, March 24, 1815; died in August at sea. He was educated in the University of Paris. He became a Professor of History in Algiers in 1840, and returning to Paris in 1845 engaged in political writing. He was active in the Revolution of 1848, was the associate of Lamennais in the publication of the "Peuple constituant" newspaper, was elected a deputy from Landes, acted on the Committees on Public Works and on the Constitution, and vigorously opposed the Prince President. Exiled after the *coup d'état,* he founded at Brussels a review called "La Libre recherche," and published a book on "The Victims of the Coup d'État." He subsequently resided in Switzerland, and then in Florence and Madrid. In 1869 he returned to France, and under the Government of National Defense published a newspaper, "Le Peuple souverain." He was elected deputy for Landes in 1871, and became an influential member of the Extreme Left. He was an earnest advocate of free trade, and opposed the concession of further monopolies to railroad companies. He was elected a deputy for Paris in 1876 and re-elected in 1877. Among his published works are "The Ancient and

Modern Races of North America" (1845), "The Encyclopedists" (1865), "The Conspiracy against the Small States in Europe" (1867), and a treatise on "Revolutions" (1870).

Earle, William, Major-General, an English soldier, born May 18, 1833; killed in the battle of Kirbekan, near Dulka Island, on the Nile, Feb. 10, 1885. He was the son of a baronet, was educated at Harrow, and entered the army in 1851. He distinguished himself for gallantry in the Crimean War. In 1870 he attained the rank of colonel, and in 1880 became a major-general. In 1862 he was Military Secretary in Canada. In the campaign against Arabi he protected the line of communication, and was present at Tel-el-Kebir. He commanded the garrison in Alexandria in 1883 until ordered to join the Gordon relief expedition. When Lord Wolseley divided his forces into three detachments, Gen. Earle was placed in command of the one that followed the bend of the Nile.

Fabbrizzi, General **Nicola,** an Italian patriot, born in Modena in 1805; died March 31, 1885. He took an active part in the insnrrection of 1831, was banished from the country, and assisted from Malta the Sicilian and Roman movement of 1837, and returned to join the Palermitan insurrection in 1848. He assisted in the defense of Venice and in the operations against the French at Rome. From his exile in Nice he joined Garibaldi's Thousand of Marsala, and fought with distinguished gallantry and ability. Garibaldi made him dictator in Sicily. In 1867 he was a general in Garibaldi's army. He represented Modena in the Chamber of Deputies.

Fairlie, Robert F., an English engineer, born in 1831; died in London in October, 1885. He was the inventor of the double-bogie locomotive-engine in use in Russia, South America, New Zealand, Canada, and other countries.

Fehling, Hermann von, a German chemist, born in Lubeck, June 9, 1812; died in Stuttgart, July 2, 1885. He studied natural sciences at Heidelberg under Leopold Gmelin, took up chemistry at Giessen under Liebig, and for a short time was at Paris with Dumas. His close application to work attracted the attention of Liebig, and the friendly relations that followed developed in such a manner that they regarded the results as among the best acquisitions of their lives. In 1839, on the special recommendation of Liebig, he was appointed Professor of Chemistry and Director of the Laboratory attached to the Polytechnic School at Stuttgart, which chair he held till his death. For some years following this appointment his time was occupied with the reorganization and extension of the scientific departments under his supervision, and many chemists, now eminent in their profession, look back with gratification at the encouragement received while studying under Fehling's direction. His investigations were many, and his original scientific papers date from 1838. The first was in regard to the isolation of fulminic acid. While at Giessen he studied the substances now known as metaldehyde and paraldehyde. His work on the sulphobenzoic acid belongs to the same period. At Stuttgart his labors included investigations on anemonin, on the compounds of palladium haloids with ammonia, on the action of sulphuric acid on succinic acid. The discovery that benzonitrile could be produced by the separation of water from ammonium benzoate was one of his most brilliant achievements. Gradually his time became absorbed in special duties, and his work more practical. He had been made a member of the Medical Faculty, and was also engaged in the Patent-Office and other public departments, as well as being an important member of the Pharmaceutical Board of Examiners. Later, he undertook the direction of a Government Laboratory established for industrial purposes. In this connection the subject of accurate analytical methods for industrial purposes was thoroughly studied by him. Many of the conventional determinations now made, originated with him; such as the estimation of sugar by the use of the solution that bears his name. He produced an excellent German edition of Payen's "Chimie Industrielle" (1850), and was actively concerned in the publication of the later editions of Graham-Otto's work on chemistry (1857). He was a contributor to the earlier volumes of the "Handwörterbuch" of Liebig, Poggendorf, and Nöhler, and editor of the later volumes. In 1871 the "Neues Handwörterbuch der Chemie" was begun under his editorship. On all occasions where questions requiring the assistance of chemical specialists were considered, Fehling appeared as the representative from his country.

Ferdinand, King, Duke of Saxe-Coburg, father of the King of Portugal, born Oct. 29, 1816; died in Lisbon, Dec. 15, 1885. He married Maria II, Queen of Portugal, in 1836. During the minority of his eldest son, the late King Pedro V, he acted as Regent. In 1869 he married morganatically Madame Hensler.

Fraser, James, Bishop of Manchester, born in Prestbury, near Cheltenham, England, Aug. 23, 1818; died in Manchester, Oct. 22, 1885. He was graduated at Oxford, and became a Fellow of Oriel College. In 1847 he was presented to the rectory of Cholderton, Wiltshire, where he remained for thirteen years. He became chancellor of Salisbury Cathedral in 1858, and from 1860 to 1870 he was rector of Upton-Nervet in the valley of the Kennett, Berkshire. During this period Dr. Fraser visited the United States and Canada, chiefly with a view to examine the school system. Between 1861 and 1868 he served on general commissions to inquire into educational matters and the employment of women and children in agriculture. In January, 1870, Mr. Gladstone appointed him Bishop of Manchester. He was perhaps the most liberal of the English bishops, a large-minded, large-hearted, able, and hard-working man. He had taken no adequate vacation for many years, and his sudden and unexpected death was entirely due to overwork. He was, after the death of Dean Stanley, the broadest of all the eminent clergy of the English Church, and was generally known as "the Bishop of all Denominations."

Gordon, Charles George, an English soldier, killed by the soldiers of the Mahdi at the taking of Khartoum, Jan. 27, 1885 (see EGYPT, and for biographical details, GORDON, CHARLES GEORGE, in the "Annual Cyclopædia" for 1883; see also portrait in "Annual Cyclopædia" for 1884, page 282).

Grant, James Macpherson, an Australian statesman, born in Scotland in 1822; died at Sydney in November, 1885. He emigrated with his parents to Australia. He often held cabinet positions in Victoria, and was popular as the author of reforms in the land laws.

Halifax, Viscount, an English statesman, born at Pontefract, Dec. 20, 1800; died in London, Aug. 8, 1885. He was educated at Eton and at Oriel College, Oxford, where he took a double first-class in classics and mathematics at the age of twenty. He became the private secretary of Earl Grey, and in 1826 was elected to Parliament from Great Grimsby. In 1829 he married a daughter of Lord Grey. He was Secretary to the Treasury under Earl Grey in 1832, and Secretary to the Admiralty in Lord Melbourne's second administration. In 1846 he entered Lord John Russell's Cabinet as Chancellor of the Exchequer. The same year he succeeded his father as Sir Charles Wood. He was a member of every Liberal ministry from this period until the close of Gladstone's first administration, serving as President of the Board of Control under Lord Aberdeen, First Lord of the Admiralty in Lord Palmerston's first Cabinet, Secretary of State for India under Lord Palmerston and Earl Russell, and Lord Privy Seal under Mr. Gladstone. He was raised to the peerage in 1866. During his forty years' service in the House of Commons he represented successively the boroughs of Great Grimsby, Wareham, Halifax, and Ripon.

Hiller, Ferdinand, a German composer, born in Frankfort, April 24, 1811; died in Cologne, May 11, 1885. He studied music under Hummel at Weimar, and subsequently in Paris, where he gained repute as a pianist. His opera "Romilda," written after his return to Frankfort in 1835, was produced at Milan, but was unfavorably received. The oratorio "The Destruction of Jerusalem" was brought out at Leipsic with the help of Mendelssohn. From 1850 to 1884 Hiller was orchestral conductor at Cologne. He was an author and critic of renown as well as a successful composer, conductor, and teacher. His two hundred musical compositions include six operas, two oratorios, three symphonies, several cantatas, sonatas, chamber-music, songs, and pieces for the pianoforte. He wrote several volumes of musical memoirs and critiques. His criticism was to a large extent directed against the Wagnerian school of music.

Hood, Edward Paxton, an English author, born in London, Dec. 18, 1820; died there, June 12, 1885. He was the son of a common sailor, received a limited education, became a Congregational minister, and settled at Brighton. He was for many years editor of the "Eclectic Review," and afterward of the "Preacher's Lantern." His principal works are "Wordsworth, a Biography," "The Life of Swedenborg," "The Earnest Minister," and a large volume entitled "Lamps, Pitchers, and Trumpets." His two latest works were "Oliver Cromwell" and "Scottish Characteristics." He also edited two bulky and popular volumes, "The World of Anecdote" and "The World of Religious Anecdote." For many years Mr. Hood was pastor of the Independent Chapel, Falcon Square, London.

Houghton (Richard Monckton Milnes, Baron Houghton, of Frystone Hall, Yorkshire), born there, July 19, 1809, the only son of Robert Pemberton Milnes; died in London, Aug. 11, 1885. He was graduated at Cambridge in 1831, and entered the House of Commons, taking the place that his father long had held as member from Pontefract, in 1837. He held this seat continuously until August, 1863, when he was raised to the peerage as Baron Houghton. Although he entered Parliament as a Conservative, he was liberal in his opinions and action, and during his political career of nearly half a century it was difficult to identify him with either of the great political parties. He was a warm advocate of popular education; and as a defender of freedom of conscience, he upheld many liberal religious schemes. Measures for the reformation and aid of criminals elicited his hearty co-operation. He published in 1834 "Memorials of a Tour in Greece." Four years later he issued "Memorials of a Residence on the Continent" and "Historical Poems." He continued to devote himself to literary pursuits, and particularly to poetry and poetical subjects, his various volumes of verse securing a large measure of popularity. The titles of his works are as follow: "Poetry for the People" (1840); "Memorials of Many Scenes" (1843); "Palm Leaves," "Poems Legendary and Historical," and "Poems of Many Years" (1844); "Good-Night and Good-Morning" (1849); "Monographs, Personal and Social" (1873); and "Poetical Works" (1874). Most of them have been republished in the United States. In 1848 Lord Houghton edited the literary remains and letters of John Keats, and in 1865 he edited the poems and prepared a memoir of David Gray, to whom, while living, he had been a generous friend. Carlyle truthfully said of him: "He has his peculiarities, but he has a kind, good heart. Many a starving man of letters owes his life to him. No one knows better than I do the many £50 notes he gave to keep a struggling man's head above water; and no one ever knew it from himself." Lord Houghton printed various pamphlets and speeches on political topics, among them "Thoughts on Party Politics," "Real Union of England and Ireland," and "Events in 1848, especially in their Relation to Great Britain." He was also a frequent contributor to periodicals. During the American civil war he was a firm friend of the Union, which fact gave additional cordiality to the reception extended to him when, in 1875, he first visited the United States. The Union League Club gave him a grand reception, and many private entertainments were given in his honor. Lord Houghton felt much interest in the success of the London Library, and succeeded Carlyle as its president. His successor is Lord Tennyson. Near the close of the season, when on the eve of his departure for his Yorkshire manor-house, he went to the theatre on the evening of Aug. 11, returned early, entered the apartment of his sister, Lady Galway, with whom he resided in London, and fell dead at her feet without uttering a word. Lord Houghton married, in 1851, Annabella Hungerford Crewe, sister of Lord Crewe, by whom he had two daughters and a son, Robert Offley Ashburton (born in 1858), who succeeds to the title and estates. The deceased nobleman will be chiefly remembered as the generous friend of literary men, and as the writer of many agreeable books. His poetry, while not of the highest order, has been admired for its elegance and musical versification. He was a diligent collector of rare books and old folios, and died possessed of one of the finest private libraries in Europe.

Horsford, Sir Alfred, an English soldier, born in Bath in 1818; died at Munlochy, near Inverness, Sept. 13, 1885. He was educated at Sandhurst. He served as captain in the Caffre War of 1846 and that of 1852, and as lieutenant-colonel in the Crimean War. In the Indian mutiny he commanded a battalion at the battle of Cawnpore, and was in command of the infantry in the engagements in Oude. He was made a major-general in 1868, a lieutenant-general in 1875, and a general in 1877.

Howson, John Saul, an English clergyman, born in Giggleswick, Yorkshire, May 5, 1816; died in Bournemouth, Dec. 15, 1885. He was graduated at Cambridge, in 1837, gaining the Norrisian prize essay. He took orders in 1845, and became Senior Classical Master, and in 1849 Principal, of the Liverpool College, which post he held till the close of 1865, when he was appointed Vicar of Wisbeach. Two years later he was made Dean of Chester, and also Examining Chaplain to the Bishop of Ely. He successfully carried out the formidable undertaking of restoring Chester Cathedral, which was completed in 1872 at a cost of £40,000, all of which the dean collected. He was a voluminous author and an able vindicator of the evangelical principles of the Church of England. The work by which he will be chiefly remembered was that undertaken in conjunction with the Rev. W. J. Conybeare, entitled "The Life and Epistles of St. Paul" (1852, reprinted in the United States). Mr. Conybeare supplied the translations, while Mr. Howson undertook the historical and geographical portions. A few years ago the dean visited the United States, and preached several times during his sojourn in New York. His other works include "Deaconesses," "Hulsean Lectures for 1862," "Metaphors of St. Paul," "Companions of St. Paul," "Chester as it Was," and "Thoughts for Saints' Days."

Hudson, Sir James, an English diplomatist, born in 1810; died at Strasburg, Sept. 20, 1885. He was educated at Rugby and Westminster, and in Paris and Rome. During the reign of William IV he acted as his assistant private secretary, and then entered the diplomatic service. In 1838 he was Secretary of Legation at Washington. In 1850 he was appointed Envoy to Brazil, and from 1852 to 1863 he was Minister to Turin, and was influential in bringing about Italian unity, and was Cavour's most zealous and powerful helper.

Iwasaki Yataro, a leader of the progressive movement in Japan, born of a military family in 1833; died Feb. 7, 1885. After the revolution of 1868, in which his province, Tosa, aided the Mikado's party, he managed a line of coasting steamers, and in 1873 was chosen manager of the lines established by the Government. The fleet was afterward transferred to him. In 1877 his transports enabled the Government to suppress the Satsuma rebellion.

Jeffreys, John George, an English naturalist, born in Swansea, Jan. 18, 1809; died in London, Jan. 24, 1885. He was a solicitor and attorney, but devoted himself from boyhood to the study of conchology. He was a member of the "Porcupine" dredging expedition in 1869–'70, and of a similar expedition on the United States coast in 1871; also of the "Valorous" Arctic expedition, in which he superintended the scientific investigations, and of the French dredging and sounding expedition of 1880 in the Bay of Biscay. Of his numerous published writings, the principal is the standard treatise on "British Conchology."

Jenkin, Fleeming, Professor of Engineering in Edinburgh University, born in Kent in 1833; died June 12, 1885. His principal published work was "Magnetism and Electricity," besides which he wrote a treatise on bridges, one on "Healthy Houses," and a "Primer on Magnetism and Electricity."

Jovanovich, Lieutenant Field-Marshal Baron **Stefan,** Governor of Dalmatia, born in 1828; died in Zara, Dec. 11, 1885. He was the son of a Croatian officer, and entered the Austrian military service in 1845, became military secretary to the Governor of Dalmatia, and was sent on diplomatic missions to Montenegro and Albania. He suppressed the revolt of the Crivoscians in 1869, and in 1878 was appointed to the command of the army of occupation in Bosnia and Herzegovina, of which he quickly gained possession by the capture of Mostur and the storming of Trebinje. In 1881 he put down a revolt of the Crivoscians and a rising in Herzegovina. The same year he was appointed Governor of Dalmatia.

Jolly, Philip von, a German physicist and mathematician, died Jan. 1, 1885, in Munich, where he filled the chair of Physics in the university. He conducted important experiments on endosmosis and on the expansion of gases by heat, and, as the result of observations of atmospheric variations, discovered a new method of ascertaining the weight and mean density of the earth.

Kalish, Marcus M., a German biblical critic, died Sept. 23, 1885. He was exiled in consequence of the Revolution of 1848, and resided after that in England, where he was befriended by prominent Hebrews. He wrote a "Critical Commentary of the Pentateuch," an exceedingly learned work reflecting the opinions of the rationalist school of criticism. He also published a Hebrew grammar, and a book of German poems entitled "Leben und Kunst."

Kiel, Friedrich, a German composer, born in Puderbach, Oct. 7, 1821; died in Berlin, Sept. 14, 1885. He was the author of a *requiem*, a *stabat mater*, an oratorio called "Christus," and a *missa solennis* and other sacred pieces, displaying technical knowledge and refinement and purity of style.

Kostomaroff, Nicholas Ivanovich, a Russian historian, born in 1817; died in St. Petersburg, April 19, 1885. He served a few years in the army. His dissertation on the Uniate schism was suppressed in 1842. His treatise on Russian popular poetry failed to secure him a professorship at Kharkov because he was suspected of democratic leanings. Becoming assistant professor at Kiev in 1846, he was arrested and incarcerated in the fortress at St. Petersburg for a year, and then interned at Saratov. When Alexander II came to the throne he was liberated from police surveillance and allowed to publish his historical writings, which fill forty volumes. Since 1858 he had occupied the chair of History in the University of St. Petersburg.

Lacoste, M. (known by his pen-name of "Saint Amand"), born Nov. 1, 1797; died in Paris, Jan. 16, 1885. He wrote the melodrama "L'Auberge des Adrets," was joint author of "Robert Macaire," and produced "La Chaise de Poste," "Philippe II, Roi d'Espagne," and many other vaudevilles.

Landerer, Franz Xaver, a German pharmacist, living in Greece, born in Munich in 1809; died in Athens, July 19, 1885. He studied philosophy and medicine at the University of Munich. Prince Otho of Bavaria, elected King of Greece in 1832, made Landerer, who had just completed his studies, Instructor in Pharmacy at the school in Athens. In this capacity he was successful in doing much to establish pharmacy on a scientific basis, and to overthrow the ignorance and superstition among those practicing this art. In 1834 a commission was appointed for the purpose of compiling a Greek pharmacopœia. This work was undertaken by Landerer, John Bouros, and Joseph Satorius, and in 1837 the book was published, printed both in Latin and in modern Greek. Landerer prepared in 1868, at his own expense, a new edition of this work, which he greatly enriched by a voluminous commentary entirely written by his own hand. The University of Athens was established in 1837, and Landerer was called to fill the chair of Physics, Chemistry, and Pharmacy. In 1843 a law was passed forbidding any but native Greeks from holding official places, and he was obliged to give up his professorship. As no one suitable to take his place could be found, he was continued in office by a special order of the Government. He also served for twenty-five years without remuneration as Professor of Chemical Technology at the Polytechnic School of Athens. The popular prejudice against foreigners, which in 1862 led to the dethronement of the King and the expulsion of many of his German associates, seriously affected Landerer, and he was compelled to resign all his state appointments. His chief attention from this time was directed to the management of a pharmaceutical establishment of his own which he had founded at Athens, and to literary work. His contributions to contemporary journals are very numerous. His articles refer chiefly to the origin and uses of Oriental remedies. Within the past few years he successfully organized the Panhellenic Pharmaceutical Society, and also began the publication of a pharmaceutical journal in Greek.

MacCabe, Cardinal, Archbishop of Dublin, died in Kingston, Feb. 11, 1885. He was born in Dublin, of poor parents, and showed such intellectual promise that he was admitted to Maynooth College, and was ordained as a priest. Cardinal Cullen selected him for the office of administrator of the cathedral. In the course of time he became vicar-general, and in 1877 coadjutor-bishop, and in 1878 succeeded Cardinal Cullen in the archbishopric. In 1882 the Pope made him a cardinal. He discouraged the Irish movement, and inveighed against conspiracy and revolution.

Maffei, Andrea, an Italian poet, born in Trent in 1800; died in Milan, Oct. 27, 1885. He studied in Germany, and began his literary career by translating the German poets into Italian. He subsequently translated "Paradise Lost" and "Childe Harold." He wrote a great number of poems, distinguished for elegance and purity of style; but he was disliked by his countrymen for his attachment to the Austrians.

Mamiani della Rovere, Count **Terenzio,** an Italian statesman and philosopher, born in Pesaro in 1800; died in Rome, May 21, 1885. He was educated by the Jesuits in Rome. In 1831 he was one of the leaders of the popular movement in the Romagna, and was a member of the provisional government of Bologna. Captured by the Austrians, he was incarcerated in

Venice, and after several months set free, on condition that he should reside abroad. He went to Paris and devoted himself to philosophical and literary studies. Excluded at first from the amnesty of Pius IX, he was recalled by that Pontiff in 1847, and in May, 1848, intrusted with the portfolio of the Interior. He opposed the republic in the Constituent Assembly. He retired to Genoa when the French arrived, and in that city founded the Italian Academy of Philosophy. He was elected a deputy in 1859, and soon after was nominated a senator. In 1860 Cavour made him Minister of Public Instruction. At the same time he occupied the chair of History and Philosophy in the University of Turin. In 1861 he was sent as Minister to Athens, and in 1865 to Bern. He was esteemed the first of Italian philosophers, and was the founder of a system modified from that of his friend Gioberti, and partly derived from the doctrines of Kant. He wrote, among other works, "Revival of the Ancient Italian Philosophy," "Dialogues of Science," "Confessions of a Metaphysician," "Cartesian Meditations," "Kant and Ontology," "Compendium of My Own Philosophy," "On the Psychology of Kant," "The Religion of the Future," and "Philosophy of the Real."

Manteuffel, Field-Marshal **Baron von,** a German soldier, born in Magdeburg, Feb. 24, 1809; died in Carlsbad, June 17, 1885. Edwin Hans Carl was the son of a judge of the Superior Court, and at the age of seventeen entered the army, joining the Dragoon Guards. He became an aide to the King of Prussia in 1848, and was often intrusted with confidential commissions of great importance, which won him the distrust and hatred of the Liberal party. In 1854 he was commissioned colonel, and three years later, as major-general, he became chief of the military cabinet having, under the King, control of all military affairs of the kingdom. In 1861 he was made lieutenant-general, and a few years later was sent to Austria to gain her co-operation in the war against Denmark, in which he succeeded. Later, he assisted in settling the differences between Austria and Prussia by the Gastein convention, and was made Governor of Schleswig. When the war with Austria broke out, in 1866, he first served under Falkenstein in Hanover, but soon became commander-in-chief of the Army of the Main. It was Manteuffel that imposed the great war contribution upon the city of Frankfort, and, during the armistice, secured Russia's assent to the reorganization of Germany. In 1868 he was recalled from his estates at Naumberg, to which he had retired, and assigned to the command of the First Army Corps. In the war of 1870, with France, he was present at Courcelles and Noisseville, and after the fall of the fortress of Metz was made commander of the First Army, with which he waged the war in the north of France, with only moderate success. Early in 1871 he was transferred to the command of the Southern Army, and there he brilliantly recovered his prestige by driving Gen. Bourbaki's army in confusion across the Swiss frontier. At the close of the war he was commander-in-chief of the army of occupation, the delicate duties of which post he performed with great tact. On Sept. 14, 1873, he was made a field-marshal. Six years later he was made Governor of Alsace-Lorraine, and his administration was exceedingly successful. The infirmities of age induced him to offer his resignation, and, after a year of retirement from public duties, he died suddenly at his favorite watering-place. When the Emperor heard of his death he mournfully exclaimed, "Alas! all my friends are dying." Marshal Manteuffel's wife died Nov. 12, 1879.

Meissner, Alfred, an Austrian poet, born in Teplitz, Bohemia, in 1822; died in Bregenz, Tyrol, May 29, 1885. His father was an author and his mother a Scotchwoman. The family was Protestant. He was graduated as a doctor in medicine at the University of Prague. He published in 1846 his epic "Ziska," which recounts the life and fate of John Huss. In 1849 he published "The Son of Atta Troll," a continuation of his friend Heine's celebrated political satire. His devotion to the cause of liberty and his Czech nationalist sympathies rendered Austria unsafe for him during the Metternich *régime;* he resided in Paris and then in London, where he was the guest of Lord John Russell. There he prepared two plays, "The Wife of Uriah" and "Reginald Armstrong; or, the World of Silver." Neither of these succeeded on the stage. "The Pretender of York," a more ambitious drama, was also a failure on the stage. In Paris he wrote "In the Year of Grace 1848" (1848) and "Revolutionary Studies" (1849). In 1855 he published his "Recollections of Heinrich Heine," and then a volume of tales, followed by one of tender lyrical poems. After that he turned his attention to writing novels. His first great novel, "Between Princes and Peoples," a political story of 1848, was published in 1860. "Sansara," which attained a wider popularity, appeared the same year. "Schwarzgelb" contests with the latter the reputation of being his greatest work. In 1861 appeared "The New Nobility" and "For the Glory of God." In 1874 were issued "The Sculptors of Worms" and "Oriola." A complete edition of his works was published in 1871–'73 at Leipsic. During the last years of his life Meissner wrote a great deal for the Austrian papers. His last important work was an autobiography abounding in anecdote.

Mezzacapo, Luigi, an Italian patriot, born in Trapani, Jan. 25, 1814; died Jan. 27, 1885. He served in the Neapolitan army until he joined the revolutionists and became Garibaldi's chief of staff and commander of the garrison at Rome. After the fall of the republic he withdrew to Genoa, where he prepared some treatises on tactics and strategy. At the beginning of the war of 1859 the Piedmontese Government made him a lieutenant-general. He organized the volunteer force of Central Italy, drove out the last of the Bourbon garrisons, and commanded the territorial division of Piacenza and then that of Cagliari. In 1866 he commanded a division under Gen. Cialdini, which did not come into action. When the Left came into power in 1876, he became Minister of War. In 1870 he was made a senator.

Monro, H. A. J., an English classical scholar, born in Elgin in 1819; died in Rome, March 31, 1885. He was educated at Shrewsbury School under Dr. Kennedy, and at Trinity College, Cambridge. His principal work was a new edition of Lucretius, published in 1860, and in revised form, with a literal translation, in 1870. In 1869 he published an edition of Horace, and "Criticisms and Elucidations of Catullus" in 1878. He wrote numerous pieces in Latin verse remarkably elegant and natural in style, and in later life accomplished the difficult task of translating Gray's "Elegy" into elegiacs, though the production was criticised for the ruggedness and license of its diction.

Mozaffur Eddin, Ameer of Bokhara, born in 1826; died Nov. 14, 1885. He succeeded his father, Nasrullah Khan, in 1860. While he was engaged in a war with Khokand and planning the conquest of Merv and the annexation of Balkh, Gen. Tchernaieff advanced in 1864 and captured Tashkend from the Khokandians. The Russian envoys sent to secure a friendly understanding with Bokhara were thrown into prison. War ensued, but Gen. Tchernaieff was driven back over the Jaxartes. Gen. Romanoffsky took a stronger force and routed the Ameer's army on May 20, 1866, and later in the year captured his two strongest forts. The peace that was concluded was broken in 1868 by the fanatical Bokharans, who provoked Gen. Kaufmann to seize Samarcand. Mozaffur accepted Russian control in his foreign policy, and gave effective aid to Russian plans during the rest of his reign.

Muirhead, John, an English engineer, born in 1807; died Sept. 24, 1885. He was assistant to the resident engineer of the tubular bridges designed by Stephenson, and continued in the employ of Stephenson when he turned his attention to the development of the telegraph. He introduced many improvements in telegraphy, notably the Muirhead battery.

Murray, Alexander, an English geologist, died in January, 1885. He served in the British navy, and was a volunteer in Canada during the rebellion. He assisted in the geological survey of Canada, and conducted a geological survey of Newfoundland. He wrote a treatise of the geology and mineralogy of that island.

Nachtigal, Gustav, a German explorer, born in Eichstädt in 1834; died April 24, 1885, on the gunboat "Möwe," on his way home from Africa. He studied medicine, and practiced as a military surgeon until obliged, by failing health, to repair to Algiers in 1862. The following year he went to Tunis and became physician to the Bey. In 1868 he started for Bornoo with presents for the Sultan from the King of Prussia, and in 1874 emerged at Khartoum. His adventures and discoveries are described in a large work completed in 1880. When the French established a protectorate in Tunis, Dr. Nachtigal was appointed consul-general, where he remained until he was sent, in the spring of 1884, as commissioner to the West Coast of Africa, charged with effecting the German annexations in that quarter.

Neuville, Alphonse de, a French painter, born in Saint-Omer (Pas-de-Calais) in 1836; died in Paris, May 19, 1885. He was sent to the preparatory naval school at L'Orient, where the drawing-master encouraged his passion for sketching. His family were unwilling to have him follow the profession of an artist. He studied law in Paris and passed his examinations successfully, but devoted much of his time to drawing from life in the military school on the Champs de Mars, and became more fixed in his determination to be a painter. In company with his father he consulted the two leading military painters of the day. They discerned no evidence of talent in his drawings, and warned him of the privations of an artist's life. Nevertheless, he entered the studio of M. Picot. When his master forbade the use of colors and set him at drawing, he left and went to work by himself. Completing his first picture, "The Fifth Battalion of Chasseurs at the Gervais Battery," in the winter of 1858–'59, he submitted it to M. Picot, who was surprised at the ripeness and vigor of the work. Altering it according to the strictures of his former master, M. de Neuville exhibited his painting in the *Salon*, and received a medal. The canvas attracted the attention of Delacroix, who encouraged the young artist to study movement. In 1860 he went to Italy in the commission of an artistic society to paint the capture of Naples by Garibaldi. He obtained a second medal, in 1861, for the "Chasseurs of the Guard in the Trenches of the Mamelon Vert." He illustrated Guyot's "History of France," and other publications of Hachette. In 1864 he obtained a marked success with "The Attack of the Chasseurs and Zouaves of the Guard on the Streets of Magenta," which was purchased by the state for his native town. In 1866 he exhibited "A Zouave Sentinel," and the following year the "Battle of San Lorenzo." When the war of 1870 broke out, De Neuville obtained a commission as an engineer officer of the auxiliary corps, and later an appointment on the staff of Gen. Collier, as commissariat officer. He participated in the engagements at Le Bourget and Champigny. He had every opportunity to pursue the artistic purposes for which he joined the army. His first picture of the war was the "Bivouac before Le Bourget," exhibited in 1872, and bought by the Government for the Museum of Dijon. The famous painting of "The Last Cartridges," which obtained him the decoration of the Legion of Honor, was exhibited in 1873. In 1875 appeared "The Attack on a Barricaded House at Villersexel." "Le Halage au Cabestan, Yport," was exhibited in 1873; "Combat on the Railroad" and "La Récolte de Varech," in 1874; "A Surprise in the Environs of Metz," in 1875; "La Passerelle de la Garede Styring—Bataille de Forbach," in 1877; "The Cemetery of St. Privat," "A Dispatch-Carrier," and Ste.-Haie-aux-Chênes," in 1881. "Rorke's Drift," depicting a passage in the Zulu war, was exhibited in London. Though surpassed as a draughtsman and as a colorist by his associate Detaille, De Neuville excelled in composition, and captivated his countrymen by his dramatic presentment of the heroic episodes of the French resistance.

Noailles, Paul, Duc de, a French historian, born in Paris, Jan. 4, 1802; died May 30, 1885. He succeeded his great-uncle in the dukedom in 1824. In Louis Philippe's Chamber of Peers he was an opponent of the English alliance and a partisan of the Bourbons. He published in 1843 a "History of the Royal House of St. Louis," and in 1848 a "History of Madame de Maintenon." In 1849 he succeeded Chateaubriand in the French Academy.

O'Hagan, Baron, an Irish judge, born in 1812; died in London, Feb. 1, 1885. He was the son of a small trader in Belfast, studied law with Chitty, and in 1836 was called to the bar, which then numbered but few Roman Catholic practitioners. His eloquence in the defense of prisoners, and especially his success in clearing Mr. Duffy, of the Belfast "Vindicator," of libel, brought him into prominence. He joined the Repealers, but abandoned politics when he could get no support for his proposal of a federal Parliament. He became Queen's counsel in 1849. In 1852 he cleared the Redemptorist Father Petcherine, who was prosecuted for publicly burning English Bibles circulated by Anglican missionaries. He defended the Phœnix conspirators in 1857. On the return of the Liberal Government he was made a sergeant-at-law in 1858, and appointed Solicitor-General in 1860, and Attorney-General in 1861. From 1862 to 1864 he sat in Parliament. In 1865 he was made a Judge of Common Pleas. When Mr. Gladstone returned to office in 1868, he appointed him Lord Chancellor of Ireland—the first Roman Catholic to hold that position. In 1870 he was raised to the peerage. He was instrumental in the passage of the Intermediate Education Act, and in the establishment of the Royal University, and was President of the Statistical Society. He retired from the bench after the conclusion of the state trials in 1883.

Orloff, Prince **Nicholas,** a Russian diplomatist, died at Fontainebleau, March 29, 1885. He was the son of a diplomatist and general. In 1854 he distinguished himself at the battle of Silistria. He was sent to represent his Government in Brussels, and afterward represented Russia in Paris for many years. He was an able diplomatist, devoted to the interests of his country, and is credited with averting a new war between Germany and France in 1875. He was transferred from Paris to Berlin in 1884, and soon after fell ill, and resigned the active duties of his post to Count Mouravieff.

Pain, Olivier, a French soldier of fortune, born in 1843 of a Spanish mother; died while being taken to El-Obeid after his services were refused by the Mahdi. In the Commune he was a leading spirit, and was conspicuous for daring and energy. He was a prisoner in New Caledonia with M. Rochefort until the amnesty. When the Russo-Turkish War began, he went as correspondent for a Paris paper, and became secretary to Osman Pasha, the Turkish commander in Plevna. When the place was captured, the Russians offered to give him up to the French authorities, but the French *attaché* refused to receive him. When he was released from imprisonment in Russia he returned to Paris, and wrote for the newspapers until he set out to join the Mahdi. After a journey of thirty days in the desert, he was arrested by the Mahdi's vedettes and taken before that potentate, who sent him to El-Obeid.

Panebianco, Cardinal **Antonio,** an Italian prelate, born at Terranova, Sicily, Aug. 13, 1808; died Nov. 22, 1885. He began his career as a Franciscan friar, and became a professor in the University of Catania and Assistant General Provincial Minister of the order in Sicily. In 1853 Pius IX called him to Rome and appointed him Consultator of the Congregation of the Inquisition and those of Rites and Extraordinary Ecclesiastical Affairs. In 1861 he was made a cardinal, and appointed Grand Penitentiary. He was devout and ascetic, and possessed talents and learning of a high order.

Parkes, Sir **Harry Smith,** British Minister at Pekin, born in 1828; died March 22, 1885. He resided in the far East from his childhood. His familiarity with Chinese brought him the appointment of assistant to the Rev. Charles Gutzlaff, interpreter to the British legation. Three years later he was interpreter to Mr. Rutherford Alcock, when he was consul at Amoy, and afterward at Foochow and Shanghai. In 1856 he succeeded Mr. Alcock as consul at Canton, and by his demand for the release of the crew of the "Arrow" he precipitated the opium war. In the reprisals of Admiral Seymour he took a prominent part. After the capture of Canton he became a member of a mixed commission for the administration of the city. He accompanied the expedition of Sir Hope Grant to the north, and conducted the negotiations with Prince Tsai at Tungchow. The members of the party were sent as prisoners to Pekin, and most of them died from their cruel treatment. He was not released until the Summer Palace was destroyed in expiation of the outrage, and the Treaty of Tientsin was concluded. During the latter part of the Taeping war he was consul at Shanghai. In 1865 he succeeded Sir Rutherford Alcock as Minister at Yeddo. During the eighteen years that he occupied that post he negotiated the commercial treaties, and influenced in a salutary direction important events in Japanese history. In 1883 he was transferred to Pekin.

Pogge, Paul, a German explorer, died at St. Paul de Loando, March 17, 1885. He was already distinguished for explorations in the Loando country when he started with Wissmann in 1881 for the Congo. Wissmann crossed the continent, while Pogge explored the Cassai region and returned to the west coast.

Ponzi, Giuseppe, an Italian naturalist, born in Rome; died there, Oct. 29, 1885. He studied medicine, and became a professor in the Roman University. He made a geological chart of the basin of Rome.

Posada Herrera, José de, a Spanish statesman, born in Lares in 1851; died Sept. 8, 1885. He was a professor in the University of Oviedo, and in 1840 was elected a deputy. When again returned to the Cortes, in 1853, he took an active part in the Liberal movement. From 1858 to 1863 he was Minister of the Interior under O'Donnell, and again in 1865. After the expulsion of Queen Isabella he went as Minister to Rome, but resigned the following year, to take his place as deputy. In the Cortes elected after the restoration he was chosen President of the Chamber. He had held portfolios in various ministries of recent years.

Renier, Charles Alphonse, a French archæologist, born in Charleville, May 21, 1809; died June 13, 1885. He was the Conservator of the Sorbonne Library, and from 1861 Professor of Roman Antiquities in the College of France. He collected inscriptions, and wrote voluminously on antiquarian and historical subjects, besides editing and translating Theocritus and other ancient writers.

Rogier, Charles, a Belgian statesman, born Aug. 16, 1800; died in Brussels, May 27, 1885. He began life as a journalist at Liége. In the revolutionary movement of 1830 he was the leading spirit, and in the Provisional Government and National Congress he took a prominent part. Under the monarchy he was one of the controlling statesmen, until he withdrew from party combinations in 1860, when the compromises and unionistic conciliation that he had striven to establish, as provincial governor, as Prime Minister, and as holder at various times of all the different portfolios, began to break down. He continued to represent Tournay in the Chamber until his death, and after his withdrawal from active politics was equally venerated by all parties as the founder of Belgian independence. He retired a poor man, and lived in a small house presented to him by national subscription.

Rosetti, Constantin X., a Roumanian statesman, poet, and journalist, born in Bucharest in 1816; died April 19, 1885. He made his appearance in literature with translations from Byron and Lamartine, followed in 1840 by a volume of songs called "Chants de Bonheur." He held posts in the police administration, but resigned in order to spread democratic doctrines. In 1848 he was a member of the Revolutionary Committee. He was appointed Chief of Police at Bucharest, and afterward Chief Director in the Ministry of the Interior. He was transported as deputy to the camp of Fuad Effendi to Orsowa, whence he was delivered by his wife, an English lady. In 1850 he founded in Paris "La Roumanie Future," a political review, and published an "Appeal to all Parties." In 1852 appeared the "Letters to Prince Stirbey" and the "Catéchisme des Villageois," the latter written in conjunction with M. Bratiano. He returned to Roumania, and was for some time Minister of Education. In 1876 he was elected President of the Chamber. Under his and Bratiano's guidance Roumania proclaimed her independence, and allied herself with Russia in 1877. Rosetti was Minister of the Interior from 1878 to 1880.

Roudaire, Colonel, a French engineer, born in Guéret in 1836; died in Paris, Jan. 14, 1885. Suggesting the project of reintroducing seawater into the Algerian *chotts*, he was sent by the Government, in 1874, to determine by measurements the feasibility of the scheme.

Sartorius, Admiral Sir **George Rose,** the last survivor of Trafalgar, born in London, Aug. 9, 1790; died there, April 13, 1885. He was the son of Col. J. C. Sartorius and Annabella Rose, granddaughter of Admiral Harvey. He entered the British Navy as a midshipman at the age of thirteen, and was present at Nelson's famous victory at Trafalgar, Oct. 21, 1805. He commanded a gunboat at the siege of Cadiz, and was three times mentioned for gallant services. In 1815 he was in command of the "Slaney," witnessed the surrender of Napoleon to the squadron under the command of Sir Frederick Maitland, and carried the first news of the capture to the English Government. In 1830–'31 he was engaged by the Terceira Regency, acting for the young Queen of Portugal, to fit out and take command of a squadron to act against Dom Miguel. In this service he was much embarrassed by a factious opposition, by contradictory orders from headquarters, and by a mutinous spirit among his seamen, in consequence of their arrears of pay being withheld from them. By great firmness the admiral succeeded in restoring order and regaining the good-will of the crews. Soon afterward he fought two engagements with the Spanish fleet, driving it into Lisbon. He gained the confidence and devotion of his men to such a degree that, when he wished to turn over his command to his friend Charles Napier, they declared their intention of not serving under any other commander until his claims were satisfied. When the Government of the Queen of Portugal was fully re-established, he received the titles of Viscount de Pudade and Count of Senhafirma. As captain of the "Malabar," he received the thanks of the President of the United States for his efforts, in 1842, to save the frigate "Missouri" from destruction by fire in Gibraltar Bay. Soon afterward he received on board the Regent of Spain, Espartero, and afforded him an asylum when closely pursued by his enemies. He was the first to foresee, in 1855, the revolution about to take place in naval warfare, by the revival of the ancient mode of striking an adversary with the prow, the introduction of which principle was soon afterward adopted. He became Admiral of the White in the British Navy in 1862, Vice-Admiral of the United Kingdom in 1869, and Admiral of the Fleet before the close of the same year. He retained his faculties to the last, and was the oldest officer and the highest in naval rank in the British service.

Schlagintweit, Robert von, a German explorer, born in Munich, Oct. 27, 1833; died in Giessen, where he held a professorship, June 6, 1885. He assisted his brothers in their scientific exploration of India in 1854–'57. His brother Adolf was murdered in Kashgar, and his brother Hermann returned from India an invalid. The chief part of the labor of working out the scientific results of the expedition thus fell to Robert. He delivered popular lectures relating his experiences, besides writing the great work on India and discharging his duties as professor of geography. In 1867 he translated his lectures into English in order to accept an invitation of the Lowell Institute to lecture in Boston and satisfy a desire to travel in America. He lectured in the United States in English and German, and, upon his return in 1870, he published seven separate works, besides smaller dissertations, treating of the West and its prospects, of the Pacific Railroads, and other American subjects. In 1880 he made another extended tour in America.

Schwarzenberg, Cardinal Prince **Friedrich von,** Archbishop of Prague, born April 6, 1809; died March 2, 1885. His mother was the beautiful Princess Schwarzenberg who was burned to death at a ball in the Austrian embassy in 1810. He studied for the legal profession, but entered the Church, and was Archbishop of Salzburg at the age of twenty-seven, a cardinal at thirty-three, and Archbishop of Prague at forty-one. In the Œcumenical Council he opposed the dogma of Papal infallibility, and in the Austrian House of Lords was a vehement opponent of the Liberal reforms of the school laws. In the Bohemian Diet he was an ally of the Czech party, but discountenanced the crusade against the German language.

Scratchley, Major-General Sir **Peter,** Special Commissioner for British New Guinea, born in 1835; died on board ship about Dec. 1, 1885. He served as an engineer officer in the Crimea and in the Indian mutiny. In 1860 he went to Melbourne to superintend the erection of fortifications. He assisted in the organization of the volunteer force, and in 1877 was sent again to Australia with Sir W. Jervis to advise upon the organization of defenses. He became colonel in 1878, and retired with the honorary rank of major-general in 1883. He was appointed Special Commissioner for the Protected Territory in New Guinea in October, 1884.

Senard, M., a French jurist and statesman, born in Rouen in 1800; died Oct. 30, 1885. He was a brilliant student, and in 1830 he headed the insurrection in Rouen. In Cavaignac's Cabinet of 1848 he was Minister of the Interior. After the revolution of Sept. 4, 1870, he was sent to Italy to signify the acquiescence of the French Government in the Italian occupation of Rome. He was elected to the Chamber in 1874 and again in 1877. In 1879 he entered the Senate.

Serrano (Francisco Serrano y Dominguez), Duke de la Torre, ex-Dictator and Marshal of Spain, born near Cadiz, Sept. 12, 1810; died in Madrid, Nov. 26, 1885. He was the son of a Spanish general, and entered the army at the age of sixteen. He displayed great gallantry and was rapidly promoted to high rank during the civil wars that followed the death of Ferdinand VII. In 1843 he brought about the fall of Espartero, and after the restoration of the Queen's mother, he joined Narvaez in his attempt to overthrow Olozago. In 1846, soon after the marriage of Queen Isabella, Serrano acquired such an influence over her that the King-consort quarreled with him, and a public scandal followed. The captaincy-general of Granada was among the first high honors conferred upon Serrano; but, in order to bring him to Madrid, the Queen made him a senator, captain-general of artillery, and then Captain-General of Castile. He took an active part in effecting several changes of ministry, and was himself twice Minister of War for brief periods. In 1860 he was sent to Cuba as captain-general. For his efforts to bring Santo Domingo under Spanish rule he was rewarded, on his return to Spain in 1864, by being made a grandee of the first class, with the title of Duke de la Torre. As President of the Senate in 1866 he protested against the prorogation of the Cortes, for which he was imprisoned. The revolution of 1868, when Queen Isabella fled, brought the marshal into great prominence. He was the chief actor in the revolution, and the Junta at Madrid made him President of the Council of Ministers and commander-in-chief of the army. This was soon followed by his being elected Regent, in which capacity he continued to act until Prince Amadeo accepted the Spanish crown. When Alfonso was proclaimed King, in 1874, Marshal Serrano retired to France, but soon returned. He continued to take an active part in politics, and in 1883 was appointed Minister of Spain to France. The marshal was married to a Cuban lady, and leaves a son and two daughters. He recently asserted that he had seen eighty changes of ministry in Spain, twoscore rebellions, and twelve changes in the head of the state.

Seyffarth, Gustavus, a German Egyptologist, born in Uebigau, Saxony, July 13, 1796; died in New York, Nov. 17, 1885. He studied in the gymnasium at Leipsic, and later in the university. In 1820 he went to Paris and studied with Champollion. He claimed that he was the first to decipher the hieroglyphics on the celebrated Rosetta Stone, and his claims were generally recognized by European scientists. In 1823 he published his "Clavis Hieroglocorum Egyptiacorum," which made him known to many *savants* and learned societies. Two years later he was appointed Professor of Oriental Archæology in the University of Leipsic, and he held this post for thirty years, publishing during that period numerous monographs and treatises. In 1855 he came to the United States and was appointed to the chair of Archæology and Exegesis in the Lutheran Seminary at St. Louis. From 1871 he resided in New York. He deciphered numerous Egyptian manuscripts in the collection of the New York Historical Society, as well as those upon the obelisk in the Central Park. Soon after its erection here, he lectured on the obelisk.

Shaftesbury (Anthony Ashley Cooper, seventh Earl of Shaftesbury), born in London, April 28, 1801; died at Folkestone, Oct. 1, 1885. He was educated at Oxford, where he obtained a first-class in classics in 1822. He was returned member for Woodstock in 1826, and supported the Government of Lord Liverpool and George Canning. In the administration of the Duke of Wellington, he was a Commissioner of the Board of Control. He was returned for Dorchester in 1830, which county he represented for sixteen years. He was elected for Bath in 1847, and sat for that borough till 1851, when he succeeded his father in the peerage. He was a Lord of the Admiralty in Sir Robert Peel's administration in 1834–'35. He was a decided evangelical Christian, and stood always among the leaders and often at the head of movements for advancing the welfare of his fellow-men. He early became distinguished by his efforts for the improvement of the social condition of the laboring classes, no man having taken more pains to inform himself of the actual condition of the poor of Great Britain. He was a great favorite among the working-people, whom he visited in their homes and whom he frequently addressed at public meetings. He achieved distinction by his devotion to social, industrial, and intellectual reform movements, but was comparatively indifferent to politics as such. He agitated successfully for laws reducing the hours of labor for both adults and children; for improving workshops, factories, and lodging-houses; also for the care of children and affecting the sanitary and moral condition of the miners and other humble classes. He was President of the Ragged School Union from its formation in 1844 until his death; of the British and Foreign Bible Society, and of the Victoria Institute, whose aim was to secure for science a better recognition from theology. He was also President of the Society for the Conversion of the Jews, of the Protestant Alliance, and of many other Christian and philanthropic institutions. For half a century he was an active advocate of the abolition of slavery throughout the world, and he was a firm friend of the United States during the civil war. His influence in the Evangelical party within the Church of England, of which he was a member, was always powerful. Few lives have been marked by such simple, earnest piety, and such unceasing devotion to the good of his fellow-men. Whenever he appeared at a public meeting, he elicited a popular enthusiasm hardly shared by any public man of the period. The last year of his life was devoted to the preparation of an autobiography, which will soon be published. While respecting his wishes that he should be buried with his ancestors at the family seat of St. Giles, in Dorsetshire, it was decided, by means of a memorial service in Westminster Abbey, to gratify a large number of friends and admirers. Unusual honors were paid to a patrician by thousands of the London poor, who swarmed in and around the ancient abbey. On his coffin lay a floral wreath sent by the Queen's eldest daughter, the future Empress of Germany, and by its side another, sent by the poor flower-girls of London. Lord Shaftesbury married, in 1830, a daughter of Earl Cowper, by whom he had three sons. The eldest, who entered Parliament in 1857, and visited the United States in 1860, succeeded to the title and estates. Lady Shaftesbury died in 1872. She was a superior and most estimable woman, who shared in her husband's philanthropic work.

Shairp, John Campbell, a British scholar, born at Houstoun House, Linlithgowshire, July 30, 1819; died in London, Sept. 18, 1885. He received his education at Oxford, and was appointed assistant master at Rugby. In 1857 he was called to a professorship at St. Andrews, and in 1868 he was made principal of the college. For the last four years of his life he filled a professor's chair at Oxford. Prof. Shairp was the author of several volumes of essays, lectures, and addresses, which were republished in the United States, and gave him high reputation. He also published "Kilmahoe," a Highland pastoral, with other poems. He was a frequent contributor to the magazines. His latest production was a poem entitled "The Clearing of the Glens."

Somerset, Sir **Adolphus St. Maur,** Duke of, born Dec. 20, 1804; died in Stover, Nov. 21, 1885. He was educated at Eton and Oxford, and from 1834 to 1855 represented Totnes in the House of Commons, as Lord Seymour. He held various offices under Liberal ministers, and after he succeeded his father, the eleventh Duke, in 1855, he entered Lord Palmerston's Cabinet in 1859 as First Lord of the Admiralty. He published some mathematical essays, and in 1880 a book entitled "Monarchy and Democracy."

Strathnairn, Lord (the Right Hon. Hugh Henry Rose, Baron Strathnairn), born in Berlin, March 8, 1803; died in London, Oct. 16, 1885. He was the third son of Sir George H. Rose, British Minister to Prussia at that time. The youth was educated in Berlin, and entered the British Army at the age of seventeen. After attaining the rank of lieutenant-colonel, he became successively consul-general in Syria and *chargé d'affaires* at Constantinople. He saw active service during the Crimean War, where he was severely wounded. During the mutiny of 1857 in India, the command of the Central Army was bestowed upon him. His rapid marches and numerous victories won for him much renown. For his valuable services, which culminated in the capture of Jhansi, he received the thanks of Parliament. He succeeded Lord Clyde as commander-in-chief in India, and directed the amalgamation of the English forces with the armies of the late East India Company, at the same time reforming many long-standing abuses. He resigned in 1865, and soon afterward was placed in command of the British forces in Ireland. In 1870 he resigned, and took his place in the House of Lords, having in 1866 been raised to the peerage as Baron Strathnairn. In 1877 he was made a field-marshal, being regarded as the ablest general in the British army. Hugh Rose was a *preux chevalier* of the old school, and had a rare faculty of finding out merit in a subordinate. On witnessing Victor Hugo's theatrical funeral he remarked, "I hope no fuss will be made over me when I die." This request was remembered, and the old marshal was buried without unnecessary pomp. He was a bachelor, and his title expired with him.

Sullivan, Sir Edward, Lord Chancellor of Ireland, born in Mallow in 1822; died in Dublin, April 13, 1885. He was educated at Trinity College, Dublin, was called to the bar in 1848, was appointed Solicitor-General in 1865, and represented Mallow in Parliament from that year till 1870. He became Attorney-General in 1868, and piloted through Parliament the Irish Church Act and the first Land Act. He was appointed Master of the Rolls in 1870, and Lord High Chancellor in 1883.

Thomas, Sidney Gilchrist, an English metallurgist, born in 1849; died in Paris, Feb. 1, 1885. He entered the civil service, but devoted his leisure time to chemical research. In 1878 he announced the discovery, made jointly with his friend Gilchrist, of the basic process for the elimination of phosphorus from steel in Bessemer converters.

Thoms, William John, an English antiquary and editor, born in London, Nov. 16, 1803; died there, Aug. 18, 1885. He began life as a clerk in the secretary's office of Chelsea Hospital, and used his leisure hours in contributing to the "Quarterly Review" and other periodicals. In 1838 he was elected a member of the Society of Antiquaries, and from that year till 1877 he was Secretary of the Camden Society. His first work, "A Collection of Early Prose Romances," appeared in 1828, and his latest, on "The Longevity of Man," in 1873. Between those dates he wrote or edited numerous publications, including an edition of Stow's "London." He was the projector in 1849 of "Notes and Queries," which he carried on successfully for many years, and on his retirement from the editorship in 1873 he was honored with a public dinner. From 1863 till 1882 he was Deputy Librarian of the House of Lords.

Tso Tsung-Tang, a Chinese statesman, born in 1812; died Sept. 4, 1885. After the Taeping rebellion he reduced to subjection and order the revolted districts in Central Asia from Kansu to the borders of Cashmere. This great achievement gave him a higher reputation among his countrymen than has been acquired by any other Chinaman since Tseng-Kwofan. Upon his return from the pacification of the frontier provinces, the treaty ceding to Russia the Ili district was submitted to him for his advice. He wrote a memorial declaring war to be preferable to the ratification of so disgraceful an instrument. The Russians, who had reason to avoid a contest with Tso's army of veterans that was on the spot, conceded all that was demanded. Tso Tsung-Tang was given a place on the Tsung-li-Yamen. The straightforward and imperious soldier soon got into difficulties both with the foreign envoys and with the officials of the court. He proposed to put a stop to the Indian opium-traffic, and promised to suppress the cultivation of the poppy in China as he had already done in Kansu, by sending his soldiers to tear up the plants. He insulted Sir Thomas Wade, and drew from the palace officials many memorials complaining of his rude and arrogant conduct. At last he was promoted to be Viceroy of Nankin and superintendent of the southern trade, the highest office in the empire outside of the capital. He resigned on account of ill-health, but was intrusted after the outbreak of French hostilities with the superintendence of the defenses of the southern frontier and the seaboard. He was intensely conservative by nature and opposed to the innovations proposed by his rival, Li Hung Chang, yet before his death he is reported to have advocated the introduction of railways, in order to increase the military strength of the empire. Tso Tsung-Tang was rigidly honest, and free from the various forms of peculation that are common among Chinese administrators. He was a sufferer from disease for several years before his death, and frequently petitioned to be retired from public service, but the Empress invariably refused his request, granting him only a leave of absence for recuperation, until within a few weeks of his decease, when he was suffered to resign. He was a Grand Secretary of the Empire and Senior Guardian to the Heir Apparent.

Vallès, Jules, a leader of the Paris Commune, died Feb. 14, 1885. He was condemned to death, July 5, 1872, but escaped to London. Returning to Paris after the amnesty of July 12, 1880, he resumed his journalistic career and conducted the "Cri du Peuple," an extreme radical and socialistic newspaper.

Vaux, William Sandys Wright, an English numismatist and Oriental scholar, born in 1818; died June 23, 1885. He published in 1850 "Nineveh and Persepolis," and contributed to the series of "Ancient History from the Monuments" a work on "Persia from the Earliest Period to the Arab Conquest," and one on "Greek Cities and Islands of Asia Minor," besides preparing a hand-book of the antiquities in the British Museum and writing a great number of special papers.

Veitch, John, a Scottish author, born in Peebles, Oct. 24, 1829; died in Edinburgh, July 17, 1885. He was educated at the University of Edinburgh, where he won honors in logic and moral philosophy. He published in 1859 a translation of Descartes's "Discourse on Method," and three years later selections from the same author's "Principles of Philosophy." He was the author of "The Tweed and other Poems," and "The History and Poetry of the Scottish Border." But his most important work, which has been a mine of wealth to Greek grammarians and lexicographers, is "Greek Verbs, Irregular and Defective." He was assistant to Sir William Hamilton in the University of Edinburgh, and in 1864 was made Professor of Logic and Rhetoric in the University of Glasgow.

Watson, Jean L., a Scottish authoress, born in Edinburgh in 1835; died there, Oct. 7, 1885. In "Bygone Days in Our Village," and "Round the Grange Farm," she has faithfully pictured the surroundings and social aspects of Roxburghshire, where she spent some of her early years. Her lives of the Erskines, Dr. Thomas Guthrie, and Dr. Andrew Thompson, enjoyed great popularity. In conjunction with Miss Sarah Tytler she compiled two valuable volumes in "The Songstresses of Scotland."

Webb, Thomas William, an English astronomer, born in 1807; died in May, 1885. He was graduated at Oxford in 1829, and became vicar of Hardwick and prebendary of Hereford Cathedral. He was the author of a hand-book for amateur astronomers, "Celestial Objects for Common Telescopes," which has proved a valuable aid to observers of that class, and has contributed to increase their number and to the diffusion of more general interest in astronomy, and is highly appreciated by professional astronomers as well. He also published "Christmas and Easter Carols" and a "Continuation of the Rev. J. Webb's Civil War in Herefordshire," and was a contributor to numerous periodicals.

Weldon, Walter, an English chemist, born Oct. 31, 1832; died Sept. 20, 1885. He went to London in 1854, and for several years gained a bare livelihood by literary pursuits. The absence of any chronicle of scientific progress led to his publication in 1860 of a monthly journal called "Weldon's Register of Facts and Occurrences in Literature, Science, and Art," which was continued for three years. Processes for the manufacture of aluminum and magnesium were devised by him, but never put into practice. His attention was directed to the manufacture of chloride of lime, and from experiments begun in 1866, continued until 1869, the Weldon process was developed. The manganese, formerly a refuse product, was recovered to the extent of 90 to 95 per cent.; the price of bleaching-powder was reduced by £6 a ton; its production was quadrupled, and something like £750,000 per annum was added to the English national wealth. Dumas said of this achievement, "By Mr. Weldon's invention, every sheet of paper and every yard of calico has been cheapened throughout the world." The successful maintenance of his patents required enormous labor and constant research; still his interest continued in the various branches of industrial chemistry, as his many papers on technical subjects testify. The French Government nominated him Chevalier of the Legion of Honor. The gold medal of the Société d'Encouragement was given to him. He was a Fellow of the Royal Society both of London and Edinburgh, and also a Fellow of the Chemical Society. He was one of the most active leaders in the formation of the Society of Chemical Industry, and was its president in 1883–'84. Its journal owes much to his personal interest.

Woodford, James Russell, Bishop of Ely, born at Henley-on-Thames, April 30, 1820; died in London, Oct. 24, 1885. He was graduated from Cambridge in 1842, was ordained, and was incumbent of the new district church of St. Mark's, Euston, from 1847 to 1855, when he was presented to the vicarage of Kempsford, Gloucestershire. This living he held until 1868, when he was chosen successor to Dr. Atlay, at Leeds. He was also for many years examining chaplain to the late Bishop Wilberforce, who in 1867 bestowed upon him an honorary canonry in Christ-Church, Oxford. He was nominated to the bishopric of Ely in 1873, and was consecrated Dec. 14. Dr. Woodford, whose views were what is termed "High Church," was the author of several volumes of addresses and sermons, including "Lectures on the Creed," "Sermons preached before the University of Cambridge," "Addresses on the Church, Past and Present," etc. When the late Bishop of Oxford was asked who was the best preacher in England he answered, "Woodford—that is, he is the second best"! The Bishop of Ely never married.

Wordsworth, Christopher, Bishop of Lincoln, born in 1807; died March 21, 1885. His father, Master of Trinity College, Cambridge, was a brother of the poet Wordsworth. Christopher was educated at Winchester and Trinity College. Like his elder brother at Christ-Church, who became Bishop of St. Andrews, he distinguished himself in the university not only by taking the principal prizes, but by proficiency in athletics. He was elected a fellow of his college and went into orders. In 1836 he was appointed Master of Harrow, where he remained until he was nominated Canon of Westminster in 1844. In 1836 he published "Athens and Attica," the fruit of travels in Greece, and later, "Greece: Pictorial, Descriptive, and Historical"; an account of "Ancient Writings, copied from the Walls of the City of Pompeii" (1838); a new edition of "Theocritus"; "The Correspondence of Richard Bentley" (1842); "Memoirs of William Wordsworth" (1851); an edition of the Greek Testament; "The Old Testament in the Authorized Version, with Notes and Introductions"; "Theophilus Anglicanus," a manual of Anglican theology and history; various tractates against Romanism, and a vast number of other controversial writings. He was appointed Archdeacon of Westminster in 1865, and Bishop of Lincoln in 1869.

Worsaac, Jens Jacob Asmussen, a Danish archæologist, born at Vejle, in Jutland, March 14, 1821; died at Copenhagen, Aug. 15, 1885. After completing his course at the Copenhagen Academy in 1838, he devoted himself to the study of Scandinavian antiquities at the Royal Museum, and traveled through Denmark, Sweden, and Norway, in search of early remains. In 1845 he visited Germany, and published the results of his researches under the title of "The National Antiquities of Germany." He subsequently studied the relics of the old Scandinavian civilization in Great Britain, Ireland, Brittany, and Normandy. He was Professor of Archæology in the University of Copenhagen, and Director of the Museum of Scandinavian Antiquities. Many of his writings have been translated into German and English.

OHIO. State Officers.—The State officers for 1885 were: Governor, George Hoadly, Democrat; Lieutenant-Governor, John G. Warwick; Secretary of State, James S. Robinson; Auditor, Emil Kiesewetter; Treasurer, Peter Brady; Attorney-General, James Lawrence; Commissioner of Common Schools, Leroy P. Brown; Board of Public Works, Charles A. Flickinger, Henry Weible, John P. Martin; Judges of the Supreme Court, W. W. Johnson, George W. McIlvaine, Martin D. Follett, John W. Okey, Selwyn N. Owen; Clerk of Supreme Court, J. W. Cruikshank. Judge Okey died during the year, and the Governor appointed Gibson Atherton to fill the vacancy until his successor could be elected.

Finances.—The total taxable property of the State is returned at $1,670,079,868, being an increase of $3,694,213 over the valuation for 1884. The total levy for all purposes was $31,374,758.57. The State and local debt, as it stood Nov. 15, 1885, was: Funded State debt, $3,720,229.19; irreducible State debt, $4,490,087; total local debts, $53,290,398.53. The decrease in the funded State debt was $382,650, and the increase of local debts $4,013,225.53.

Railroads.—There are 7,124·604 miles of railroad in Ohio (an increase of 70·789 miles for the year); 6,416·978 miles of standard-gauge and 707·626 miles of narrow-gauge road. There were 32,895,641 passengers carried, and the total mileage or number of passengers carried one mile was 1,160,503,943, at an average rate of fare per mile of 2·174 cents. There were 68,511,017 tons of freight carried at an average rate per ton for each mile of ·689 of a cent. The gross earnings were $98,950,539.63, and net earnings were $27,611,629.30.

Penitentiary.—There were in the Penitentiary on Nov. 1, 1885, 1,470 prisoners, or 105 more than on Nov. 1, 1884. Of these, 1,446 were males and 24 females. Of those between twenty-one and twenty-five, first term, 354; second term, 49; third term, 10; and fourth term, 1. Of those between twenty-five and thirty, first term, 229; second term, 34; third term, 10; fourth term, 1. Of those over thirty years of age, first term, 366; second term, 64; third term, 17; fourth term, 10; and fifth term, 5.

Benevolent Institutions.—The number of patients under treatment in the Insane Asylums during the year ending Nov. 15, 1885, was 4,767, an increase of 104. Of these, 474 recovered, 194 were discharged improved, 281 unimproved, and 222 died.

In the Institution for Feeble-minded Youths there were 463 boys and 287 girls; in the Deaf and Dumb Asylum, 243 boys and 215 girls; in the Blind Asylum, 147 boys and 101 girls; and in the Soldiers' and Sailors' Orphans' Home, 496 boys and 266 girls.

At the Boys' Industrial School there were during the year 683 boys; number remaining Nov. 15, 1885, 471; daily average, 447.

At the Girls' Industrial School there were during the year 360 girls; number remaining Nov. 15, 1885, 279; daily average, 278.

Mines and Miners.—The Chief Inspector of Mines reports the erection of 45 ventilating furnaces and 19 fans, 43 air-shafts sunk, and 13 safety-catches placed upon cages; 112 mine-scales have been inspected during the year, 26 mines have been worked out and abandoned, and 28 new mines opened. There are now in the State 344 mines employing ten men or more, and 209 that are worked only for private consumption. The total number of miners in Ohio is 17,734.

Military.—The Ohio National Guard consisted on Nov. 15 last of 5,870 rank and file, an increase during the year of 42 men. The force is divided into 90 companies of infantry, comprising 11 regiments, 1 battalion, and 2 unattached companies. The artillery was divided into 6 batteries of 4 and 2 of 2 guns each. Since Nov. 15 one two-gun battery has been dissolved.

Hocking Valley Strike.—The troubles in the Hocking valley mining region, which continued for a considerable part of 1884, ceased in the spring by the surrender of the men to the terms prescribed by their employers. A disagreement late in the year, as to rate of wages, was referred to arbitration.

The Legislature.—The adjourned session of the Sixty-sixth General Assembly began Jan. 6, and closed on May 4. A large number of bills were passed, but none of them were of marked interest.

Political Conventions.—The Republican State Convention was held at Springfield, Jan. 11, and the following ticket was nominated: For Governor, J. B. Foraker; Lieutenant-Governor, R. P. Kennedy; State Treasurer, John C. Brown; Attorney-General, J. A. Kohler; Supreme Judge, G. W. McIlvaine; member of Board of Public Works, Wells S. Jones. The death of Judges McIlvaine and Okey before the election necessitated the placing on the ticket, by the State Committee, of two new candidates—Thaddeus A. Menthall for the full term, and William T. Spear for the vacancy.

The Democratic State Convention met at Columbus, Aug. 20, and continued two days. All the State officers were renominated except for Board of Public Works, Henry Weible being chosen for that place.

Full State tickets were also placed in the field by the Prohibition and Greenback-Labor parties.

The Election.—The platforms of the several parties contained no distinctive State issues that entered into the contest, except the liquor question. The Republicans declared for regulation of the liquor-traffic by taxation, the Democrats favored regulation by license and the submission of a constitutional amendment for that purpose. The Prohibitionists wanted absolute prohibition. Other issues were brought in by the speakers, but it was generally conceded that the liquor controversy was the paramount question. The result was the election of all the Republican candidates. The following was the vote on Governor and Lieutenant-Governor:

GOVERNOR.

J. B. Foraker (Republican)	359,281
George Hoadly (Democrat)	341,830
A. B. Leonard (Prohibition)	28,081
J. Northrop (Greenback)	2,001

LIEUTENANT-GOVERNOR.

Robert B. Kennedy (Republican)	360,720
John G. Warwick (Democrat)	341.809
William G. Frost (Prohibition)	27,043
Milton B. Cooley (Greenback)	2,057

Constitutional Amendments.—At the same election were submitted several constitutional amendments. One providing that township officers shall be elected for a term not exceeding three years, as may be fixed by law, but shall hold their offices until their successors are elected and qualified, was ratified by yeas, 538,558; nays, 53,177. A group of three amendments had for their object the change of the elections from October to November, to conform to the United States law regulating presidential and congressional elections. The first of the group provided for the biennial election, on the first Tuesday after the first Monday in November, of Senators and Representatives, the term of office to begin Jan. 1 thereafter. This was ratified by 536,273 yeas to 53,223 nays. The second provided for the election of the Governor, Lieutenant-Governor, Secretary of State, Auditor, Treasurer, and Attorney-General, on the same day in November, which was ratified by 534,669 yeas to 53,629 nays. The third provided for the election of county officers on the same day, for such term, not exceeding three years, as may be provided by law. This was ratified by 460,113 yeas to 59,929 nays.

Election of the Legislature.—Great interest attached to the election of the Legislature for 1886–'87, as it would have the choice of a United States Senator to succeed Hon. John Sherman. The result on the face of the returns was as follows:

PARTY.	Senate.	House.	Joint ballot.
Republicans	17	58	75
Democrats	20	52	72

Before this result was reached, a controversy arose in Hamilton County, which affected the whole question seriously. During the canvass of the votes in Cincinnati, charges were made of gross frauds at the polls, in the count, and in making up the returns. It was claimed that forgery had been resorted to in order to give the Democrats the whole legislative delegation from Hamilton County. County-Clerk Dalton insisted that he must take the returns as they came to him, leaving each branch of the Legislature to decide for itself the right of the members to their places. The courts were appealed to, and an order was obtained forbidding him to issue certificates to the Democratic candidates, and directing the manner in which he should canvass the votes. The matter was carried to the Supreme Court, which reversed the action of the court below, and the certificates were given to the four Senators and ten Representatives that were claimed by the Democrats to have been elected from Hamilton County, leaving each house to deal with the cases when the Legislature organized.

ONTARIO. Government.—The Lieutenant-Governor is John Beverley Robinson. Executive Council: Attorney-General and Premier, Oliver Mowatt; Minister of Education, George W. Ross; Commissioner of Public Works, C. F. Fraser; Commissioner of Crown Lands, T. B. Pardee; Secretary and Provincial Registrar, A. S. Hardy; Commissioner of Agriculture and Provincial Treasurer, A. M. Ross.

Immigration.—The total number of immigrants arriving in the province in 1884 was 87,360, of whom 22,855 came by way of the St. Lawrence and Halifax, and 64,505 *via* the United States. There was a decrease of 10,155 on the immigration of 1883. There remained in the province 22,277, against 27,119 in 1883, while 58,489 went to the United States. The nationalities of the settlers in the province were as follow: English, 11,526; Irish, 3,781; Scotch, 2,623; German, 1,718; Scandinavian, 259; Swiss, 30; Icelanders, 71; Americans, 964; other nationalities, 1,814.

Farmers' Institutes.—During the winter of 1884–'85 the Farmers' Institutes inaugurated by the Provincial Government were well attended. The farmers met for the discussion of practical questions in connection with farming, and were addressed by lecturers employed by the Provincial Government.

Torrens Land System.—The Ontario Legislature made this year a very cautious trial of the admirable system of land transfer originated in Australia by Sir Robert Torrens (recently deceased), and now in operation in all the Australian colonies, Tasmania, New Zealand, and British Columbia. As an experiment, the Legislature decided to apply the system for the present only to the city of Toronto and the county of York. The Premier, in introducing his bill to simplify the transfer of land, said its purpose was to make the transfer of land as simple as the transfer of bank-stock, and the title of the holder as free from danger or difficulty as ordinarily the title of the holder of bank-stock is to the shares he holds. The act provides for the establishment of a land registry under the control of an officer to be known as the Master of Titles. All land transactions may be registered. A title may be registered as absolute or possessory. If an absolute title is required, the applicant will not be registered as the owner of the fee simple unless the title is approved by the Master of Titles. The first registration of a person as owner of any land with an absolute title will vest in that person an estate in fee simple in the land, subject to any incumbrances entered on the register. If a possessory title is required, the applicant will be registered as owner of the fee simple on giving such evidence of title as may be prescribed. The registration of any person as first registered owner of land, with a possessory title only, will not affect the enforcement of any estate, right, or interest adverse to or in derogation of the title, either subsisting or capable of rising at the time of registration. Should it appear to the Master of Titles that an absolute title to land sought to be registered can only be established for a limited period or subject to reservations, he may, on the application of the person applying to be registered as owner, except from the effect of registration any estate, right, or interest arising before a specified date, or arising under a special instrument, or otherwise particularly described in the register. A title granted under such conditions is to be called a qualified title. The Master of Titles must give to the first registered owner a "land certificate," and this certificate must say whether the title of the owner is "absolute," "qualified," or "possessory." An insurance fund is created to indemnify persons that suffer loss through misdescription, omission, or other error in any certificate of title or in any entry on the register. The fund is provided by levying a tax of a quarter of one per cent. on the value of the land on the first certificate of title being granted, in addition to registration fees. Any question as to the liability of the fund for compensation is to be determined by the Master of Titles.

Extension of the Franchise.—A franchise act was passed by the Provincial Legislature. Formerly the franchise was exercised by owners, occupants, or tenants of real estate assessed upon a value of $400 in cities or $300 in incorporated villages or townships, and persons in the enjoyment of a taxed income of $400. The new act reduces the real-estate qualification to a yearly value, not necessarily assessed, of $200 in cities and towns, and $100 in incorporated villages and townships. The income qualification is reduced to $300, and the proviso that it shall be taxed income is abolished. People can only vote now in the district in which they are actually resident. Landholders' sons are also enfranchised.

Redistribution of Seats.—An important redistribution act was also passed. The Opposition claim that it is a "gerrymander" pure and simple. The Government claim that the principles upon which the act was based were: 1. Not to increase the membership of the House except for the representation of the new territory acquired by the settlement of the disputed boundary claim. 2. Not to break down boundaries unnecessarily. 3. Not to divide townships. 4. To move in the direction of equalization.

Niagara Falls Restoration.—For many years past the condition of Niagara Falls on the Canadian side, as on the American side, has been most unsatisfactory. The action of the State of New York in opening a national park on the American side this year made the neglect of the authorities on the Canadian side more conspicuous than ever. The Ontario Government was not disposed to emulate the New York Government; but a company being organized to undertake the work of restoration, the Government promised its support, and a bill was introduced to incorporate the Niagara Falls Restoration Company. The company proposed to acquire the strip of land along the bank of the river, from a point about 500 yards above the Burning Spring to a point about 700 yards below the Clifton House, and from the water's edge to the brow of the upper plateau beyond the river-bank, and to include the Cedar and Clark Hill Islands. This was to be made into a park, to be thrown open to the public free forever. A light electric railway was to be constructed near the water's edge, to convey visitors to the rapids, and a low tariff of charges for this and similar services was prescribed. The names of the promoters were a guarantee that the affair was a public-spirited rather than a speculative enterprise. A crisis was brought about by the introduction of another scheme. A bill was brought in to incorporate the Niagara Falls Railway Company. The granting of this charter would have legalized and perpetuated many of the evils that are now only tolerated at Nigara, besides introducing new ones. Finally, an act was passed authorizing the appointment of three commissioners to lay out a park at Niagara Falls, and to negotiate with the owners of the land. The park may ultimately be owned either by the province or by a company.

Liberal Convention. — The young Liberals of Ontario held a convention at Toronto in September, and formed a Provincial Young Men's Liberal Association. The convention replied to certain rumors that the Ontario Liberals were about to change their party allegiance from the Hon. Edward Blake, leader of the Opposition in the House of Commons, to the Hon. Oliver Mowatt, Premier of Ontario, by electing the former gentleman its honorary president. The convention passed resolutions condemning the Dominion franchise bill; in favor of female suffrage; affirming the right of Canada to negotiate its own treaties; in favor of the reconstruction of the Senate; in favor of the abolition of the civil-service pensions and superannuations; demanding provincial autonomy; disapproving of the payment of subsidies to the provinces by the Dominion Government; recommending that each province collect and spend its own revenues; in favor of the largest possible measure of reciprocity with the United States; and recommending that the prohibition question be submitted to a *plébiscite.*

University Federation.—The Minister of Education, after conferring with the heads of the colleges in the province, laid the following scheme before the Legislature: It is proposed to form a confederation of colleges carrying on in Toronto work embraced in the art curriculum of the Provincial University, and in connection therewith the following institutions—Queen's University, Victoria University, Trinity University, Knox College, St. Michael's College, Wycliffe College, and Toronto Baptist College—shall have the right to enter the proposed confederation: provided, always, that each of such institutions shall, so long as it remains in the confederation, keep in abeyance any powers it may have of conferring degrees other than degrees in divinity, such powers remaining intact, though not exercised. Other institutions to be admitted from time to time by the Senate. The head of each confederating college to be *ex officio* a member of the Senate, and the governing body of each college to appoint another member. The university professoriate to be represented in the Senate by two members, and the Council of University College by two members, in addition to the president. Queen's University, Kingston, strongly opposed the proposition to centralize at Toronto the higher education of the province, and refused to join the confederation. All the others mentioned in the draft of the scheme agreed to join.

OREGON. State Government. — The following were the State officers during the year: Governor, Zenas F. Moody, Republican; Secretary of State, R. P. Earhart; Treasurer, Edward Hirsch; Superintendent of Public Instruction, E. B. McElroy. Judiciary, Supreme Court: Chief-Justice, Edward B. Waldo; Associate Justices, W. P. Lord and W. W. Thayer. Samuel Rothschild was appointed Immigration Commissioner near the close of the year.

Legislative Session. — The Legislature met in regular session on Jan. 12, and adjourned on Feb. 21. Among the acts passed were the following:

A local-option bill.
East Portland fire department bill.
Chartering Clatsop City.
Providing for an additional building for State University.
Incorporating Pendleton.
Incorporating Halsey.
Creating State Normal School at Drain.
Creating Morrow County.
For additional buildings at asylum and penitentiary and for continuation of work on State-House.
To prevent the carrying of concealed weapons.
Regulating marking of domestic animals on the ear, and providing that not more than half the ear shall be cut away.
Incorporating city of Weston.
Incorporating Independence.
A registration bill.
Incorporating La Grande.
Incorporating Forest Grove.
Creating the county of Gilliam.
To protect children from indecent publications and pictures.
Authorizing the Secretary of State and State Treasurer to fix the amount of the State tax levy.
Providing how wire fences in any of the counties east of the Cascade mountains shall be constructed.
To prevent deception in dairy products.
To pay the few outstanding soldiers' bounty bonds.
Providing for the just division of estates of debtors.
Fixing the boundaries of Columbia County.
Incorporating Stayton.
Incorporating Medford.
Incorporating the city of Junction.
Providing a State Board of Immigration.
A mechanics' lien law.
Permanently locating the State Agricultural College at Corvallis.
The Oregon Pacific Railroad bill.
Incorporating the city of Union.
To incorporate Silverton.
Incorporating McMinnville.
Incorporating Empire City.
Incorporating Yaquina City.
Declaring that the following shall be legal holidays: Every Sunday, the 1st day of January, 22d of February, 30th of May, 4th of July, 25th of December, every day on which an election is held throughout the State, and every day appointed by the President or Governor as a day of public thanksgiving, fast, or holiday.
Incorporating Dallas.
Declaring all railroads common carriers, and declaring authority of the State to fix their charges for passengers and freight.
Incorporating Amity.
Incorporating Junction City.
To incorporate Coquille City.
To incorporate Springfield.

Incorporating Albany.

A bill preventing discriminations, etc., by railroad companies.

To create a State Board of Agriculture, to promote the agricultural and other interests of the State, and to encourage immigration.

Morrow County is taken from Umatilla; Gilliam, from Umatilla and Wasco.

Regulating the sale of opium, and suppressing opium-dens and opium-smoking. Opium can not be sold without a physician's prescription.

Women are given the right to practice law.

During this session there was a memorable contest for the United States senatorship. The Legislature was divided politically as follows: Senate, 17 Republicans and 13 Democrats; House, 35 Republicans and 25 Democrats; joint ballot, 52 Republicans and 38 Democrats. The Democrats supported James H. Slater for re-election, though changing at times to other candidates. The Republicans failed to agree upon a candidate, but the greater number of them supported Solomon Hirsch. When the Legislature adjourned, 68 ballots had been taken, without result. The Governor called an extra session for Nov. 9, which met and remained in session until the 24th. On the 18th John H. Mitchell, Republican, was elected United States Senator by a vote of 55 (38 Republicans and 17 Democrats), to 20 for James H. Slater and 13 for George H. Williams (Republican).

Financial.—The estimated expenses for 1886 are $277,996.38. There were received during the year from sources other than taxes of 1884, $277,996.38. The total amount of taxable property in the State for 1884 was $78,776,011, showing a decrease this year of $1,587,317. The State levy of 1884 was $5\frac{6}{10}$ mills, showing a decrease this year in the State taxes of $1\frac{9}{10}$ mill on the dollar.

Population.—The following is the population by counties according to the census of 1885, as published in the Portland "Oregonian":

COUNTIES.	Females.	Males.	Total.
Baker *	....	....	7,000
Benton	2,658	3,350	6,008
Clackamas	4,332	5,703	10,035
Clatsop	2,095	6,504	8,599
Columbia	1,295	1,718	3,013
Coös	2,428	3,367	5,795
Curry	496	672	1,168
Crook	1,057	1,465	2,522
Douglas	3,622	4,431	8,053
Gilliam	1,027	2,328	3,355
Grant	1,734	3,148	4,882
Jackson	4,285	4,453	8,738
Josephine	1,093	1,634	2,727
Klamath	471	1,107	1,578
Lake	516	1,020	1,536
Lane	4,632	5,436	10,068
Linn	5,225	6,206	11,431
Marion	6,990	8,463	15,453
Morrow	1,136	1,580	2,716
Multnomah †	14,809	20,923	35,732
Polk	2,886	3,430	6,316
Tillamook	693	896	1,589
Umatilla	5,008	5,912	10,920
Union	4,253	5,335	9,588
Washington	3,241	4,579	7,820
Wasco	4,228	5,017	9,245
Yamhill	3,692	4,472	8,164
Total	83,902	113,149	204,051

* Estimated. † Exclusive of 4,220 Chinese.

The "Oregonian" says that the work of taking the census is done by county assessors, and is always carelessly and never fully done. Omissions are at least 15 per cent., and in sparsely settled districts even more. The returns from Baker County were destroyed in the burning of the court-house. The population of the State in 1880 was 174,768. The figures for the different counties by ages do not altogether correspond with the table above.

Agricultural and Industrial.—The census of 1885, Baker County wanting, affords the following figures: Pounds of wool, 9,165,830; number of sheep, 1,636,929; hogs, 202,612; horses, 165,909; mules, 3,591; cattle, 373,247; acres under cultivation, 1,243,456; bushels of wheat raised, 8,233,719; oats, 6,247,300; barley and rye, 1,694,614; corn, 275,077; tons of hay, 377,822; pounds of butter and cheese, 3,286,923; hops, 2,547,378; tobacco, 13,207; bushels of flaxseed, 14,262; potatoes, 2,650,284; apples, 2,005,373; prunes and plums, 150,306; barrels of salmon, 3,316; cases, 483,594; kits, 404; baskets of oysters, 3,155; tons of coal, 29,600; ounces of gold-dust, 14,965; pounds of silver, 100; feet of lumber, 169,135,716. The coal was mined in Coös County; the gold, in Grant, Josephine, Union, and Coös Counties chiefly; the silver, in Grant County.

Mortgage Tax Law.—The constitutionality of this law, which had been called in question, was passed upon in the case of Crawford *vs.* Linn County, decided by the Supreme Court of the State, on Jan. 23. The Court decided that, within the meaning of the Constitution, the act is not a special law, and does not produce inequality. It is, therefore, constitutional and valid.

Columbia River Improvement.—A convention, called the Columbia River Water-way Convention, was held at the Dalles on Dec. 2, to devise plans and united action for securing aid in the construction of locks at the Cascades and Dalles on Columbia river, so that the river may be opened to free and uninterrupted navigation. It put forth a memorial to Congress, and, after resolving itself into a permanent organization, adjourned to meet at Walla Walla, Washington Territory, on the second Wednesday of October, 1886. The improvements would provide facilities for water transportation to an extent of country embracing not less than 25,000 square miles of land. The Government of the United States has expended upon the work of constructing a canal and locks at the Cascades $955,000, and it is estimated by the United States engineer in charge that $750,000 more will so far complete that work as to make it practicable to pass boats through. The tonnage over the bar at the mouth of the Columbia river, for the year ending September, 1885, was 869,943 tons.

Portland Commerce.—The following statistics are for the years ending July 31. For 1884–'85, the arrival of wheat, and of flour reduced to wheat, represents 246,162 short tons of wheat, against 212,689 tons the preceding season. The grain fleet of 1884–'85 consisted of 113 vessels, having an aggregate tonnage of 113,373 tons. In 1883–'84 the number was 90, tonnage 94,680. The wool shipments of the year were 11,120,333 pounds (6,806,711 to San Francisco, and 4,313,621 eastward); of hops, 5,333,237 pounds; oats, 240,524 centals; potatoes, 288,606 sacks; barley, 38,650 centals; flaxseed, 26,142 sacks. The shipments of salmon from April 1 to July 31 were 217,705 cases. For the calendar year 1885 the value of domestic exports, by rail and water, was $8,373,399; foreign, $5,907,271.

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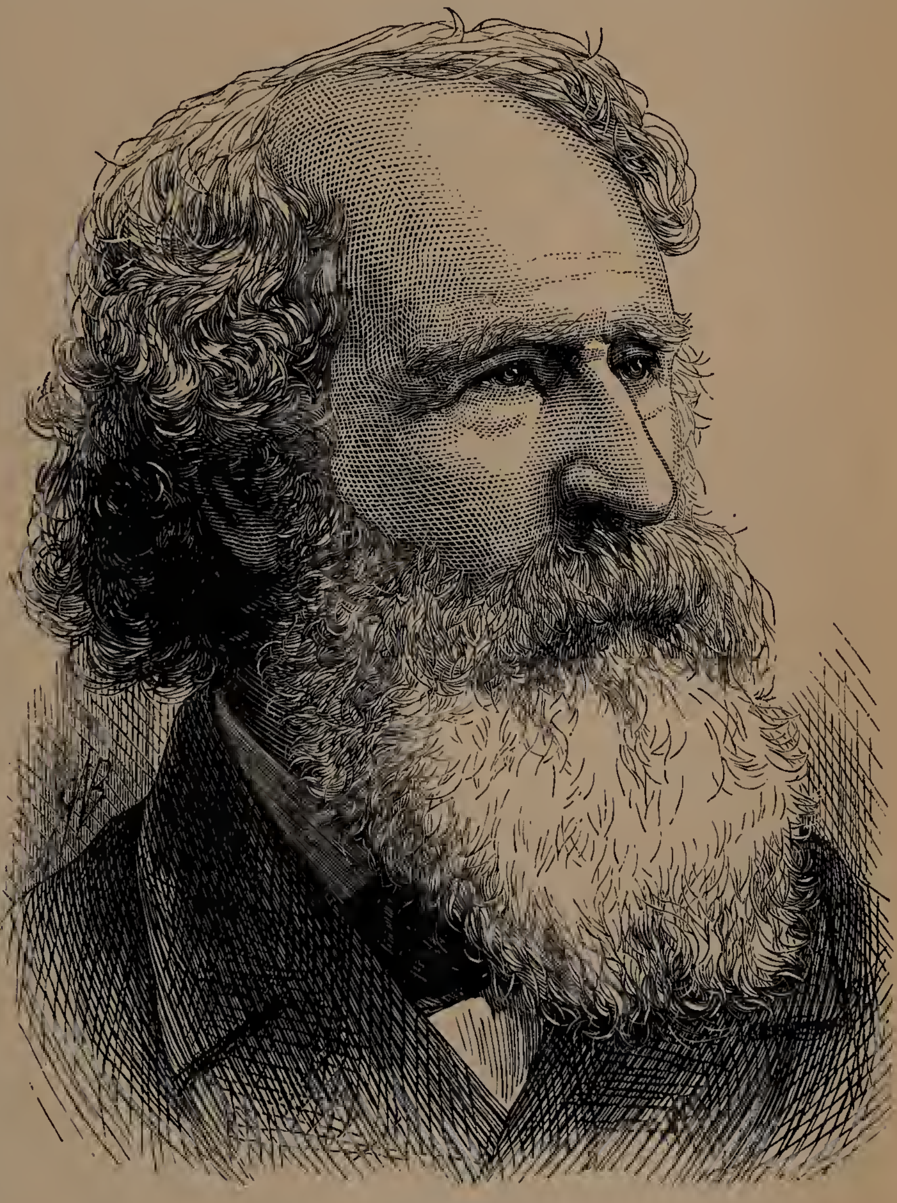
PAGE, WILLIAM, an American artist, born in Albany, N. Y., Jan. 23, 1811; died in Tottenville, S. I., Oct. 1, 1885. His father, Levi Page, a man of small education, but great natural intelligence and ability, was by turns farmer, printer, storekeeper, and navigator on the Hudson. William's education began in Albany; but while he was still young his parents removed to New York, where he studied in the public schools, and in the then well-known school of Joseph Hoxie. His art talent exhibited itself almost from babyhood, and at eleven years of age he made an India-ink portrait of Louis XIV of France, which won a prize in the American Institute Exhibition. But his father considered the career of an artist as too precarious to be encouraged, and placed the boy in the law-office of Frederick De Peyster, then Secretary of the American Academy of Fine Arts. The lawyer soon found that his pupil spent more of his time in making sketches of celebrated lawyers, whose faces adorned his legal volumes, than in committing to memory their sage opinions. Mr. De Peyster took some of the sketches to Trumbull, painter of the "Signers of the Declaration of Independence." "Can you make a lawyer of him?" asked Trumbull. "Yes, he has brains enough for anything." "Then tell him to stick to it. He has great talent; but an artist in this country can not attain wealth or fame." Page remembered the praise and forgot the warning. He left the law-office at once, and became apprentice to a portrait-painter named Herring, who kept the youth painting banners, screens, and



WILLIAM PAGE.

signs—practice which, after all, did not prove valueless. At the end of the year Page entered the studio of Samuel F. B. Morse, of telegraph fame, then the President of the new National Academy of Design. Page, then seventeen years old, received the first premium given by that institution, for the excellence of his drawings from antique models. At this time he became so deeply interested in religion that he entered the theological seminary at Andover, Mass., to prepare for the ministry, using his profession merely to assist in his support—for he could readily obtain $25 for a miniature. By the close of his second year of study he had fallen into such a condition of doubt as to doctrine, that he gave up the idea of entering the ministry, and opened a studio in Albany, N. Y. His work was successful; but he resolved to go abroad for study. But on reaching New York, he met a young lady with whom he fell so violently in love that he married her, and opened a studio on Broadway. In 1836 he was elected a member of the National Academy, was chosen to paint a full-length portrait of Gov. Marcy for the city, and was called to Boston to paint a portrait of John Quincy Adams. He also painted a "Holy Family," and "The Infancy of Henry IV of France." He removed to Staten Island, and later to Boston. Here he formed many delightful friendships, especially one with James Russell Lowell, whose portrait he painted. In 1847 Page returned to New York, and two years later he went to Europe, where he resided for eleven years, principally in Florence and Rome. There he became intimate with the Brownings, and there also he found, in the writings of Swedenborg, teaching that solved his religious doubts. On returning to America, he settled at Eagleswood, N. J., and afterward on Staten Island, although his work was done in the Studio Building in West Tenth Street. He was then living with his third wife, the first and second marriages having been dissolved by divorce, in both instances granted to the artist by the courts of his native State. In 1874 he visited Germany to study the Kesselstadt deathmask supposed to have been taken from Shakespeare's face after death. From photographs of this he made a plaster bust and painted several portraits of the poet. Among his best-known works are his bust and full-length portraits of Shakespeare, portraits of Robert Browning and Charlotte Cushman, his copy of Titian's "Venus," his own "Venus," "Moses," "Ruth," a head of Christ, the "Antique Timbrel-Player," "Farragut's Triumphant Entry into Mobile Bay," "Moses, Aaron, and Hur, on Mount Horeb," "Belladonna," and "Flora." In May, 1871, he was elected President of the National Academy of Design.

PANAMA CANAL. See page 177.

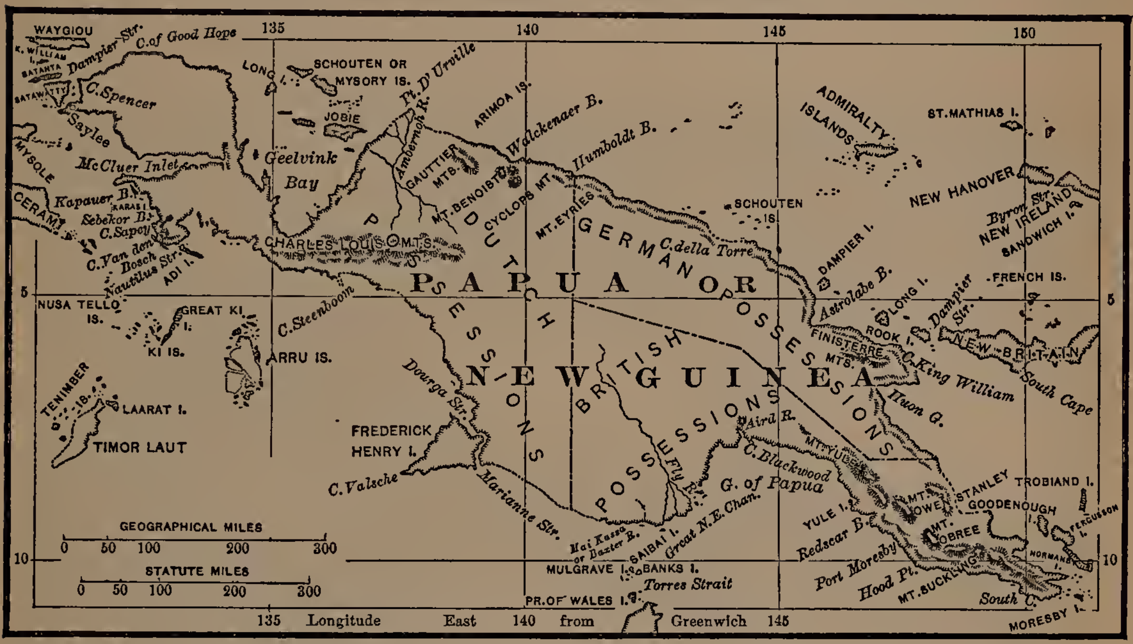
PAPUA, or New Guinea, a large island in the Pacific, north of Australia, the chief of the islands of Melanesia, inhabited by the black Papuan race. The drainage of the island is all southward in the central and eastern portion. A range of mountains from 2,000 to 10,000 feet high runs along the northern coast. The Charles Louis range, running through the center of the island, attains the altitude of 13,000 feet. The southern coast is low and flat. The interior, as far as it has yet been explored from the south, bears the same character. The country is covered with dense forests, beginning 200 miles from the coast. They are under water a great part of the year. During the rainy season vast plains are converted into lakes. D'Albertis ascended the principal stream, Fly river, to the head of navigation, 500 miles from the coast; the central range of mountains was 50 miles beyond. Except on the low and swampy southern coast, the climate of Papua is salubrious. Coral reefs fringe the southern shore, inclosing a broad sheltered roadstead extending along the whole coast to the Luisiad Islands.

Bêche-de-mer and mother-of-pearl are gathered among the reefs. The flora and fauna of New Guinea are so remarkable that they have attracted naturalists to expose their lives among the intractable cannibals that inhabit the island. It is the home of the birds-of-paradise and a favored habitat of the *Orchidaceæ*, and swarms with strange insects of marvelous forms and hues. The sago-palm grows in abundance and furnishes the principal article of export. Coconut-palms and fan-palms also abound, and the eucalyptus, the India-rubber tree, and other similar trees attain a wonderful size and luxuriance. Rice, cotton, jute, coffee, sugar, and tobacco are cultivated by the natives; also the betel-plant. Sassafras-bark is exported to India and China. The nutmeg-tree grows on the north coast. Ebony, sandal-wood, and fifteen other fine cabinet-woods are found, as well as trees well adapted for masts. The natives cultivate vegetable-gardens with care, in which they grow chiefly taro, melons, yams, and bananas. The bread-fruit is eaten as a relish. The Papuans pay great attention also to the rearing of swine, of the short-legged black Chinese breed, and export smoked pork.

Papua was discovered by the Portuguese in 1526. It received the name of New Guinea from Spanish navigators, on account of the dark hue of the inhabitants, who resembled the negroes on the Guinea coast. The area of the island is about 260,000 square miles. The woolly-haired Papuans, though often with an admixture of Malay or Polynesian blood, dwell in all parts of the island. In the eastern peninsula numerous tribes of the Polynesian type alternate with the black Papuans. Since 1855 the Dutch have maintained a missionary station at Dor'eh, on Geelvink Bay, and since 1868 one on the island of Andai on the south coast. English missionaries in Port Moresby and Towton have been more successful among the docile Polynesian populations than the Dutch among the Papuans.

Dutch New Guinea.—The Netherlands Government formally annexed the western part of

Papua, as far as the 141st meridian, in 1828. Fort Dubus was established on the south shore, but was abandoned ten years later on account of the unhealthful climate. Since 1875 a steamer from Batavia has visited the western coast at various times. More recently the Government in Java has concluded a contract with the Netherlands India Steamship Company, and steamers are to call at several points four times a year. Although the direct Dutch claims to the western half of Papua might be considered to have lapsed, the Sultan of Tidore, a vassal of the Netherlands, has exercised a suzerainty over the chiefs of this portion of the island for two hundred years. This suzerainty is still practically asserted to some extent by the Rajah of Mysole, the principal vassal of the Sultan of Tidore. The Dutch claim is strengthened by the fact of the constant trade between other Dutch possessions and the western coast of Papua. Trade with this part of New Guinea is carried on by the natives of Ceram and the Bugis of Celebes. Mohammedanism has been introduced to some extent, and the people, who in the extreme west are a mixture of Papuans with the Malayan trading tribes, have generally laid aside their nose-rings and ear and arm ornaments, and begun to adopt cotton clothing. There is considerable traffic on the shore of Kapuller Bay, where arms and powder, iron and copper utensils, linen, and rice are exchanged for nutmegs and bird-skins, articles that the coast tribes obtain from the interior in exchange for sago.



There are frequent wars between the people of the interior and the coast tribes, on account of the slave raids of the latter. The Dutch Government made an appropriation in the session of 1885 for the scientific exploration of the possessions in Papua.

British New Guinea.—Articles in the German press suggesting the German settlement of New Guinea prompted the Queenslanders in the early part of 1883 to petition the British Government to annex the island. On April 4, Police Magistrate Chester, of Thursday Island, under instructions from the Governor by advice of the ministers, formally annexed Papua to Queensland, but the act was annulled by Lord Derby. On Sept. 4, 1883, the English Government was notified that, in consequence of injuries committed by the crew of an English labor-ship on the property of a German firm that interfered to prevent outrages on natives, the German Government would keep a ship of war stationed at the New Britain and New Ireland groups to protect German trading interests. This note, asking the English Government to take measures against the repetition of outrages arising out of the Polynesian labor-traffic, was not answered satisfactorily. On Aug. 2, 1884, Count Münster was asked to try to come to an agreement with Earl Granville as to the respective spheres of interest of England and Germany in the South Sea. The Australian colonists were meanwhile clamoring for the annexation of New Guinea. The German Foreign Secretary complained because the field chosen by Germany for commercial and colonial expansion was declared to be the "natural domain" of Australia. On Aug. 9, Lord Granville sent the assurance that the extension of British supremacy in New Guinea would apply only to the south coast, though without prejudice to territorial questions beyond those limits. On Aug. 31 the Chancellor accepted his proposal to appoint commissioners to define the spheres of interest of the two governments. On Sept. 19 the German Government was notified that in consequence of negotiations between the British Government and its colonies, it had been decided to proclaim and exercise British protection on all the coasts of New Guinea except those occupied by Holland and the portion of the northern coast extending from 145° east longitude to the boundary of the Dutch possessions, and also on the small islands adjacent to the part of the coast that was taken under British protection. It was declared that the northern coast, as far as 145° east longitude, was included in the British protectorate at the request of the Malay coast natives. At this time the agents of the German South Sea Company were engaged in acquiring the cession from the coast tribes of the same portion of the northern coast. The German Government expressed surprise, and reserved its decision. On Oct. 9 the English diplomatic representative in Berlin declared that, in consequence of the representations of the German minister, his Government had resolved to restrict the British protectorate to the southern coast. On Nov. 18 a British protectorate was proclaimed from Port Moresby, over the southern coast from East Cape to the Dutch line, and over the adjacent islands (see AUSTRALASIA).

The eastern limit of the German annexation of the north coast, proclaimed on Dec. 19, was not definitely fixed. The English Government protested against the act, which was done without notice, and before the meeting of the mixed commission to delimit the spheres of interests, and the German authorities replied that England had already limited her sphere of interests to the south shore, and was aware of the German plans in New Guinea. The English Government was at this time placed in a dilemma by the excitement and anger aroused in Australia by the German annexations. The Prime Minister of Victoria telegraphed: "The exasperation here is boundless. We protest in the name of the present and the future of Australia; if England does not yet save us from the danger and disgrace, as far at least as New Guinea is concerned, the bitterness of feeling toward her will not die out in this generation." An unofficial representative, Mr. Meade, was sent to Berlin to induce the Germans to renounce their New Guinea scheme. He proposed that New Guinea and the Luisiades should be left to Great Britain, while Germany should take New Britain, New Ireland, and the Duke of York's Islands; France should be given the New Hebrides; and Samoa and all the other South Sea islands should be neutralized. After the failure of Mr. Meade's mission, and after receiving a curt reply to its protest against the German annexation, the British Government

PAPUAN HOUSES.

announced its intention to proclaim a protectorate over the eastern portion of the north coast from East Cape to the Gulf of Huon, "which may be regarded as the limit of the German annexations," and over the adjacent islands. This act the German Chancellor complained of as a distinct breach of the promise given by the English Cabinet to confine its annexations to the south coast, and an unfriendly course after Germany had declared her intentions to acquire the same territory for German colonization.

The commodore on the Australian station, who received his instructions Jan. 17, forthwith proceeded to New Guinea and took formal possession of the coast east of the Gulf of Huon, and proclaimed a protectorate also over the Louisiad and Woodlark Islands, and Long and Rook Islands, between the German possessions on New Guinea and New Britain. The D'Entrecasteaux group was included in the earlier annexation.

German New Guinea.—The establishment of German power in New Guinea was proposed to the Government in 1880, when the chairman of the administrative board of the South Sea Company, Herr von Hansemann, suggested to the Chancellor a plan for the establishment of trading settlements on the north coast from East Cape to 141° east longitude. Bismarck, whose Samoan scheme had been defeated in the Parliament, would only promise consular and naval protection to the enterprise. In June, 1884, Bismarck, who had just enunciated the principles of his colonial policy, was petitioned anew by Herr Hansemann and Herr Bleichröder to assist the plans of the South Sea Company to colonize northern Papua and the southern portion of New Britain from the German naval station of Mioko, in the Duke of York's Island. Dr. Finsch and a sea-captain named Dallmann were intrusted with the execution of these secret plans. Southern New Guinea was expressly excluded from the field of their operations.

There were no German commercial interests in Papua previous to the establishment of the protectorate on the north coast. Dr. Finsch sailed from Sydney with $10,000 worth of "trade" for Papua, and purchased the territorial privileges on which the German protectorate of northern Papua was founded. The steamer was owned by the German Trading Association. Dr. Finsch, who is a naturalist, continued on his voyage from Makou on Sept. 28, 1884, and returned three weeks later at the conclusion of his secret expedition to the northern coast of Papua. The German commissioner visited the island also. About the same time the German gunboat "Hyæna" and the corvette "Elisabeth" visited New Britain and hoisted the German flag at various points, and subsequently on New Ireland, New Hanover, and the Admiralty Islands. The limits of the German and English possessions were agreed upon by the South Sea joint commission. The later British annexation of Huon Bay and the small islands opposite King William's Land was regarded as an offensive proceeding by Germany, if not irregular and invalid by reason of prior German claims. When the "Elisabeth" returned in November, 1884, from her expedition to Astrolabe Bay, where the German flag was raised, it was said that the "Hyæna" had gone to Huon Bay for the same purpose. Before this was accomplished the British Government announced the annexation of the northern coast from East Cape to Huon Bay, as well as of the islands north and east of Papua that were not German possessions, including Rook and Long Islands off the shore of King William's Land. The British claims over the coast of Huon Bay and over Long Island, Rook Island, and the other islands adjacent to New Guinea and north of the 8th parallel of south latitude, over which British sovereignty had been proclaimed, were abandoned in the delimitation agreement arrived at. The line between the German and the English possessions in Papua starts from the east coast at Mitre Rock on the 8th parallel, and runs due west to the 147th degree of east longitude, then in a straight line in a northwesterly direction to where the 144th meridian and the 6th parallel cross, and continues from there in a west-northwesterly direction to the intersection of the 5th parallel with the 141st degree of east longitude, which is the eastern limit of Dutch New Guinea.

The charter granted by the Emperor to the New Guinea Company of Berlin on May 21, 1885, contained the first official statement of the limits of the new German possessions. German sovereignty was declared to extend over the part of Papua not under British or Dutch protection, the islands near the coast of that portion of the island, the New Britain group, to be called in future Bismarck Archipelago, and all other islands northeast of New Guinea lying between the equator and 8° south latitude, and between 140° and 154° east longitude. The formal annexation of the north coast and of New Britain took place Dec. 17, 1884.

PARAGUAY, a republic in South America. Area, 91,650 square miles; population, 350,000, besides about 150,000 Indians. The most populous city (next to the capital, Asuncion, with a population of 25,000) is Villa Rica, with 12,000; Concepcion, a center of traffic on the left bank of the Paraguay, has 11,000; San Pedro, 10,000. Before the war the population of Paraguay was 800,000. The casualties of the strife and the great loss of territory reduced it to what it is at present. There are 10,000 foreign settlers in the country. The most numerous settlers are Spaniards, and next to them Italians, then Frenchmen and Brazilians. The Government does all it can to attract settlers, the land-grants being as liberal as in the Argentine Republic and the United States. In the Chaco Paraguayo land is given settlers gratuitously. The best Government lands can be bought anywhere for $1,500 the square league, less valuable lands for $800 to $1,000. Terms of payment are exceedingly liberal, and whosoever pays cash receives a discount of 6 per cent. During the first six months the Government, if desired, advances funds to settlers. Foreigners, when naturalized, enjoy all the privileges of citizens; but only native-born Paraguayans can aspire to the offices of President and Vice-President.

Government.—The President is Gen. B. Caballero (elected Nov. 25, 1882). His Cabinet is composed of the following ministers: Interior, Col. Mesa; Secretary of State and Minister of Foreign Affairs, Señor J. S. Decoud; Finance, Señor A. Cañete; Justice and Public Worship, Señor Gonzalez; War, Col. Duarte. The United States *chargé d'affaires* is Hon. John C. Bacon.

The new Constitution was framed in 1870, on the model of that of the United States. There is a Senate and a House of Representatives, and the Vice-President is at the same time President of the Senate. The President of the republic is elected for four years, but can not serve a second term till an interval of four years has elapsed. The Chamber has 26 members, and the Senate 13. The former are elected direct by the people for four years, and the latter for six. Half of the former are renewed every two years, and the Senate is renewed to the number of one third every two years.

Education.—Public instruction is free and compulsory, and has made creditable progress. There is no university, but a national college, supported by 4 per cent. of the import duties. The French Lazarist Friars have founded a seminary, in which twenty-four Paraguayan seminarists receive instruction. There are primary schools all over the country, part of them being district schools, and a great many private schools. Asuncion has a public library, an athenæum, and three daily newspapers.

Finances.—Paraguay still nominally owes Brazil a war indemnity of $280,000,000; to the Argentine Republic, $50,000,000; and there is a British debt of $8,000,000, to which would have to be added the interest for sixteen years. Leaving out the Brazilian and Argentine claims, which are not likely to be paid, this foreign debt amounted on Jan. 1, 1883, to $16,818,412. Negotiations were set on foot in the spring of 1885 to compromise the indebtedness to British bondholders by reducing the £1,505,400 of capital due to £850,000. Dating from June 30, 1886, the Paraguayan Government proposes to pay holders of the reduced debt 2 per cent. interest per annum for five years, 3 per cent. for another five years, and 4 per cent. till the bonds are paid in full. The payment of the coupons will be secured by the customs revenue. For accumulated coupons during fourteen years, the Government proposes to issue land-warrants. That portion of the original bonds thus remaining unpaid is to remain on deposit in the Bank of England, and not to be returned to the Paraguayan Government till on Jan. 1, 1891, it is shown that the latter has performed all it proposes to do under this compromise. The home debt does not exceed $342,311.

Communications.—There is in operation a railway from Asuncion to Paraguary, 45 miles. The number of passengers conveyed in 1884 was 95,764, and the receipts were $88,451.

There is a telegraph line running beside the above-named railway, and there was finished in March, 1884, a line to Paso de la Patria, which connected Paraguay with the American and European systems.

The items of mail-matter passing through the Paraguayan post-offices in 1884 numbered altogether 258,514, against 175,802 in 1882. The receipts in 1884 were $3,340, against $2,303 in 1882.

PATAGONIA. See page 41.

PATENTS. Below is given the first and last number of patents, etc., issued for the year 1885. The total number deduced from these must be somewhat modified by allowing for the withdrawal of a few patents, which is done without alteration of the series of numbers:

CHARACTER.	First number.	Last number.	Total number.
Patents	310,163	333,493	23,331
Reissues	10,548	10,676	129
Designs	15,678	16,450	773
Trade-marks	11.843	12,909	1,067
Labels	4,304	4,694	390

Decisions.—We give a few of the more interesting decisions:

A patent is a grant—not of a monopoly in the prohibited sense, however, as the public is deprived of nothing already possessed. It is a contract between the public and the patentee, the Government as representative of the public making the grant, and the patentee disclosing his invention. (C. A. Yale Cigar Manufacturing Company *vs.* C. A. Yale, xxx, 1183.)

The addition of certain elements to a patented construction which does not unfit it for performing its original functions, but simply adds the new results due to the new elements, does not avoid infringement. (Tate *et al.* *vs.* Thompson, xxx, 345.)

The specification of an application for an alleged pioneer invention is addressed to those skilled in the art as it existed before the making of the particular invention therein referred to, not as developed later. (Voelker *vs.* Gray, xxx, 1091.)

Parties who employ a patented device ought not to expect a defense resting upon an alleged want of utility to find much favor with the court. (Phillips, Nimich & Co. *vs.* D. W. C. Carroll & Co., xxxi, 265.)

Trade-Marks. — Registration of trade-marks and labels in the United States Patent-Office is provided for by special enactments. The Trade-Mark Law of March 3, 1881, in thirteen sections, with supplemental act of Aug. 5, 1882, provides that owners of trade-marks used in commerce with foreign nations or with the Indian tribes, provided such owners shall be domiciled in the United States, or located in any foreign country or tribe which by treaty, convention, or law, affords similar privileges to citizens of the United States, may obtain registration of such trade-marks by complying with certain conditions. Registration will also be granted to trade-marks of citizens or residents of this country wishing the protection of a trade-mark in any foreign country the laws of which require registration in the United States as a condition precedent. This gives the necessary status of an applicant. The conditions are briefly as follows: 1. Payment of twenty-five dollars into the Treasury of the United States. 2. Statement of applicant's name, citizenship, residence, place of business; if a corporation, under what laws, State or national, incorporated, time during which the trade-mark has been used, for what class of goods, how applied, with a full description of its device. 3. Declaration under oath to the effect that the party has a right to the use of the trade-mark, that no other person has such right, that such trade-mark is used in lawful commerce with foreign nations or Indian tribes, one or more of which should be named; and finally, that it is truly represented in the fac-simile which must be presented for registry. Interferences may be declared as in the case of patents. The protection is in force for thirty years, and upon payment of a second fee may be renewed for thirty years more, provided it is for an American manufacture, otherwise it can only be extended so as to cover the period of its franchise under the laws of any foreign country protecting it.

Labels.—Labels and prints designed for use for articles of manufacture may be registered by citizens and residents of the United States in the Patent-Office under the act of June 18, 1874, sections 3, 4, and 5 (18 Statutes at Large, p. 78). Prints and labels are construed in Patent-Office practice as synonymous, and as indicating any descriptive device intended for attachment or impress upon articles of manufacture or packages containing the same. They must not be arbitrary or fanciful, but truly descriptive, otherwise registration will be refused them as being trade-marks. Five copies must be filed, one of which will be returned certified to by the Commissioner of Patents. For registration a fee of six dollars is required. It will continue in force for twenty-eight years. It is probable that the benefits of this act by recent treaties have been extended to British subjects and citizens of Germany. This registration of labels is a copyrighting of them, under the law of copyrights, and the Commissioner of Patents is merely the substitute of the Librarian of Congress in the office of registrar, when labels for manufactured articles are in question.

In the "Official Gazette of the United States Patent-Office," lists of labels and trade-marks, as registered each week, are published.

The present practice of the Patent-Office is to discriminate between labels and trade-marks. When an applicant presents a device and asks that it be registered as a label, it is examined, and, if found arbitrary and fanciful in its proposed use, such registration will be refused it as being a trade-mark. This is in the face of several decisions of the Supreme Court of the District of Columbia. The ground taken by the Court was that the duties of the Commissioner in the matter were purely ministerial, and that he had no right to exercise this discrimination. In a recent case (Moodie *vs.* Butterworth Com.), decided Dec. 27, 1884, the mandamus asked for by the applicant for registration of a label was refused by the Court. This confirms the propriety of the office practice. Under these rulings, cases involving a certain amount of hardship may arise. A person may wish to register a trade-mark not used in commerce with foreign nations or Indian tribes. On account of such failure he could only select label registration. Then, on sending his fee for such protection, he would be refused it, while his fee would be retained, and from the circumstances of use of his device he could not register it as a trade-mark.

Any person, firm, or corporation located in any of the following countries can have the benefit of this act: Russia, Belgium, France, Austria, the German Empire, and Great Britain.

The registry of labels is done in accordance with the eighth clause of section 8 of the first article of the Constitution.

When registered, a trade-mark becomes the subject of protection by United States courts, even in a suit between citizens of the same State, without regard to the amount in controversy. Without such registration a suit between citizens of the same State must be decided in the courts of the State. A label, when registered, becomes the subject of copyright, and is protectable as such.

On application, and without any charge, the Commissioner of Patents will mail to the applicant a pamphlet containing the trade-mark and label statutes, and the rules and practice of the Patent-Office relating thereto.

PENNSYLVANIA. State Government.—The following were the State officers during the year: Governor, Robert E. Pattison, Democrat; Lieutenant-Governor, Chauncey F. Black; Secretary of State, William S. Stenger; Treasurer, William Linsey; Auditor-General, Jerome B. Niles; Secretary of Internal Affairs, J. Simpson Africa; Attorney-General, Louis C. Cassidy; Adjutant-General, Pressly N. Guthrie; Superintendent of Public Instruction, E. E. Higbee; Insurance Commissioner, J. M. Forster. Judiciary, Supreme Court: Chief-Justice, Ulysses Mercur; Justices, Isaac G. Gordon, Edward M. Paxson, John Trunkey, James P. Sterrett, Henry Green, and Silas M. Clark.

Legislative Session.—The Legislature met on Jan. 6, and adjourned on June 12. The following are among the acts of the session:

Providing for the appointment of a commission to revise the mining and ventilation laws in the bituminous coal regions.

Relating to the study of physiology and hygiene in the public schools and aided educational institutions.

To provide for the burial, etc., of honorably discharged soldiers, sailors, and marines.

To authorize the admission of destitute children of deceased soldiers or sailors of the State to the Soldiers' Orphans' Schools.

To prevent the adulteration of dairy products.

To permit defendants to testify in criminal cases.

To provide for the incorporation and regulation of natural-gas companies.

To provide for the better government of cities of the first class.

For the suppression of lottery-gifts by storekeepers and others to secure patronage.

To establish a State Board of Health.

To punish copartners for fraudulently appropriating the property or using the name of the copartnership, corporation, or association.

To establish a home for disabled and indigent soldiers and sailors.

Making it a misdemeanor for any member of a copartnership, firm, or association to keep fraudulent accounts, or destroy or mutilate the firm books.

To prevent the establishment of joints, booths, or other places for the smoking or other use of opium.

Authorizing trust companies to transact safe-deposit business.

To prohibit the manufacture and sale of toy deadly weapons.

Relating to warranties in the applications for life-insurance policies.

To prevent the mutilation, etc., of books, etc., in public libraries, museums, or galleries.

For the destruction of wolves, wild cats, foxes, minks, hawks, weasels, and owls.

To protect oil, gas, and water wells, tanks, pipes, and machinery connected therewith.

Relating to marriage licenses, providing for officers therein indicated to issue licenses.

Relating to the granting of letters of administration upon the estates of persons presumed to be dead.

To prohibit the creation of irredeemable ground-rents.

To prevent the employment of female labor in and about coal-mines and the manufactories thereof.

Relating to bituminous-coal mines, and the lives, health, and welfare of employés therein; the same as to anthracite mines.

To prevent the adulteration of and the traffic in impure milk in cities of the second and third classes.

The Governor vetoed numerous measures, among them acts reapportioning the State for legislative and congressional purposes. J. Donald Cameron, Republican, was re-elected United States Senator. The new marriage law requires a license as a prerequisite. Formerly no license was necessary. The law relating to city government increases the power of the mayor.

Finances.—The balance in the State treasury, Nov. 28, 1884, was $2,117,585.11; receipts during the following year, $8,179,714.28; total, $10,297,299.39; expenditures, $8,513,257.53; balance Nov. 30, 1885, $1,784,041.86. The following were the chief items of receipt and expenditure:

RECEIPTS.

Tax on corporation stock and limited partnership	$2,037,618 29
Tax on gross receipts (corporations)	918,308 14
Tax on bank-stock	363,273 80
Tax on loans	555,323 61
Tax on personal property	620,971 88
Tax on writs, wills, deeds, etc.	130,523 27
Tax on collateral inheritances	797,369 33
Foreign insurance companies	307,203 39
Tavern licenses	634,888 29
Eating-house licenses	133,119 71
Retailers' licenses	453,428 66
Allegheny Valley Railroad Company	222,500 00
United States Government	119,378 30
Commutation of tonnage-tax	460,000 00

EXPENDITURES.

Senate	$133,322 36
House of Representatives	400,360 80
Judiciary	549,706 08
Public printing and binding	147,293 18
Loans redeemed	1,111,600 00
Interest on loans	820,987 50
Premiums on loans redeemed	165,075 25
Purchasing United States bonds	1,346,812 50
Charitable institutions	809,624 52
Reimbursement for care and treatment of indigent insane	230,026 20
Soldiers' Orphan School	310,258 03
Penitentiaries	209,819 00
Huntingdon Reformatory	100,000 00
National Guard	237,511 76
Common schools	1,193,517 19

Education.—The last report of the Superintendent of Public Instruction covers the year ending June 1, 1885. The number of enrolled pupils has increased 16,119, making a total of 982,158. The increase of average number of pupils in actual attendance is 21,450. The difference between the number enrolled and the number in attendance is 325,030. The total number of teachers is 22,864, an increase of 400. There has been a decrease of 88 in the number of male teachers and an increase of 488 in the number of female teachers. The average monthly salary for males is $39.01, and for females $30.08. There were 432 new buildings reported.

Assessment of Property.—The number of taxables in 1884 was 1,267,767; value of taxable real estate, $1,663,562,940; value of household furniture, including gold and silver plate (exceeding $300), $2,292,855; money at interest, including bonds, stocks, etc., $26,374,185; horses and mules over four years old, 455,499; value of same, $24,242,168; neat cattle over four years old, 597,831; value of same, $11,687,582; money at interest taxable at the rate of four mills on the dollar, $115,833,134; value of property taxable for State purposes at the rate of four mills on the dollar, $14,483,141; value of pleasure-carriages and buggies, $4,548,998; valuation of salaries, emoluments of office, posts of profit, trades, occupations, and professions, $77,859,261; value of all property taxable for county purposes (Philadelphia wanting), $1,214,407,990; aggregate amount of State tax assessed, $611,526.56; of county tax, $15,544,529.27; of county debt, $72,964,710.24 (Philadelphia, $65,889,899.74). The taxable value of real estate in Philadelphia was $573,728,105; in Allegheny County, $195,603,480. The census (1880) valuation of *farms alone* is much higher in almost every county than the assessed value of *all real estate* taxable in the county as returned by the county commissioners. Similar inequalities exist in other items of property. It is doubtful if the real estate on the average is assessed at more than half its value.

Railroads, etc.—The number of corporations embraced in the report of the Secretary of Internal Affairs for 1884 is 305, classified as follows: Steam railroads, 228; passenger railways, 50; canals, 8; telegraphs, 11; telephones, 4; and combined telegraph and telephone, 4. The aggregate length of all tracks in Pennsylvania is 12,765 miles. Twenty-seven companies reported the length of their lines without giving any trackage in the State. Most of these are new enterprises, with roads in various stages of progress, while others are old enterprises that have never made much headway, but whose projectors seem indisposed to abandon them. The company reports show $726,322,549.79 of capital stock paid in at the close of 1884, an increase of $32,288,996.69, compared with 1883. Funded and unfunded debt, $775,438,674.42, an increase of $51,926,033.49. The total of stock and debt reported is $1,501,761,224.21. The cost of roads and equipment, as reported, is $975,313,784.35, or $526,447,439.86 less than the stock and debt. There has been an increase in the number of passengers and a decrease in the quantity of freight.

State Institutions.—The institutions that are owned and controlled by the State consist of the Eastern Penitentiary, the Western Penitentiary, the Industrial Reformatory at Huntingdon, five hospitals for the insane, viz.: the Lunatic Asylum at Harrisburg, the Western Pennsylvania Hospital at Dixmont, Allegheny County (not strictly a State institution), the Hospital for the Insane at Danville, the Northwestern Hospital for the Insane at Warren, the Southeastern Hospital for the Insane at Norristown; the Pennsylvania Reform School at Morganza, Washington County, and the Hospital for Injured Persons of the Anthracite Coal Region at Ashland, Schuylkill County. There are several institutions not under State control, for the care and support of the defective and delinquent classes, in which State aid is extended to the indigent class. The Institutions for the Blind, Deaf and Dumb, Feeble-minded Children, and the House of Refuge, at Philadelphia, are included in this class.

Criminal Statistics.—An analysis of the returns of prothonotaries or clerks of criminal courts for the year ending Sept. 30, 1884, shows the criminal proceedings of grand juries, as compared with the preceding year, and court proceedings have increased, thus:

PROCEEDINGS.	1883.	1884.
GRAND JURY:		
Persons charged with crime....	17,288	18,259
Bills laid before grand jury	13,815	14,353
Bills returned as true bills.....	10,480	11,489
Bills returned ignored...	3,369	3,538
COURT:		
Bills tried..........................	7,554	8,525
Acquittals	4,262	5,008
Convictions........................	3,360	3,325
Nolle prosequies..................	1,198	1,530
Pleaded guilty to indictment...	2,248	2,261
Recognizances forfeited........	$277,575	$227,550

Insane.—The number of insane confined in institutions of all classes in Pennsylvania, Sept. 30, 1884, was 5,374 (2,683 males and 2,691 females), of whom 3,331 were native-born, 1,948 foreign-born, and 95 of unknown birth; 1,032 were private patients and 4,342 indigent; 557 curable and 4,817 incurable; 89 were insane convicts and 259 criminal insane.

The number of criminals of all classes in confinement on Sept. 30, 1884, was 5,289, being an increase of 355, or 7·20 per cent., on the number in confinement at the corresponding date of the previous year.

The system of labor in the penitentiaries is entirely on State account. Contract labor was abolished by an act of the Legislature, June 13, 1883.

Poor Relief.—There are 63 almshouses in the State, 34 of which are county institutions, and 29 are local or district almshouses. The aggregate of inmates of all classes in these institutions (excluding the insane in Blockley Almshouse, Philadelphia), on Oct. 1, 1883, was 8,930. To these were added during the year 13,527, making a population of 22,457. There were discharged during the year 13,162, leaving, Sept. 30, 1884, 9,295. The number of persons in receipt of out-door relief during the year ending Sept. 30, 1884, was 18,980. The summary of the "Unfortunate and Indigent Classes" does not include the vagrants assisted in almshouses, or by out-door relief. The total number relieved during the year was 43,057.

Political.—The Republican State Convention met in July, and nominated for Treasurer Matthew S. Quay. The Democratic State Convention assembled in August, and made Conrad B. Day its nominee. The candidate of the Prohibitionists was Barr Spangler; of the Greenbackers, W. D. Whitney. On Nov. 3, Quay was elected, the vote being as follows: Quay, 324,694; Day, 281,178; Spangler, 15,047; Whitney, 2,783; scattering, 836; total, 624,538.

Mining Accident.—In December, a mine at Nanticoke became flooded with water, which cut off a large number of miners from escape. Every effort was made for days to rescue them alive, but without success.

Philadelphia Statistics.—The City Comptroller's report for 1885 shows that the receipts from all sources for the year were $14,129,756.16; expenditures, $14,298,413.85. The increase of revenue over 1884 was $448,951.80. The cost of the city departments, exclusive of the public buildings, was $8,647,755.90. The amount actually collected in 1885 was $10,059,103.72, which exceeds the estimate $437,490.89, the tax rate being $1.85 on $100. The revenue, other than current taxes, was $4,070,652.44. The average for the past five years was $4,669,700.50, showing a decrease of $599,048.06.

The Collector of the Port has prepared a statement showing the imports received in the city during 1885, and places their value as follows: Articles admitted free, $5,586,797; dutiable, $27,778,445; in American vessels, $9,244,287; in foreign vessels, $24,120,955; total, $33,365,242.

PERSIA, an empire in Asia. The Government is an absolute monarchy, based on the precepts of the Koran, resembling in constitution that of the Turkish Empire. The Shah, or Emperor, claims absolute obedience as the vicegerent of the Prophet. The country is divided into thirty-four provinces, under thirteen governors, mostly princes of the royal family. The towns and villages elect their own magistrates. The reigning Shah is Nassr-ed-Din, born July 17, 1831, who succeeded his father, Shah Mohammed, Sept. 10, 1848.

Area and Population.—The area is about 610,000 square miles. The population is about 10,000,000, including 2,500,000 nomads. The largest city is Tabreez, with about 300,000 inhabitants; the next in size is Teheran, the capital, with about 200,000.

Commerce.—The foreign trade is estimated at about $5,000,000 of imports and $3,000,000 of exports. The principal imports are cotton goods, glass, paper, iron, and copper manufactures, sugar, and tea; the leading exports are silk, tobacco, skins, rugs, opium, gums, wool, dates, cereals, and rice. The commercial intercourse is with England, Russia, France, Germany, and Italy. There has been an indirect trade in American stoves, clocks, cigarettes, canned goods, toys, and sewing-machines. Recently clocks and cigarettes have been imported directly from the United States. Persian opium is imported indirectly into the United States, and embroideries and *bric-à-brac* have recently been sent directly to New York. Although commerce in general is falling off, and several of the old industrial arts have become extinct, there has been an increase in late years in the production of opium and cotton and in the manufacture of carpets.

Finances.—The receipts of the Shah's treasury amount to $10,200,000 in money and $1,500,000 in produce. The expenses are about $11,200,000, of which $4,400,000 are devoted to the army, $2,250,000 to the royal court, and $1,250,000 to religion.

The Royal Succession.—The question of the succession to the throne is an anxious and disquieting subject in Persia. The Shah is said to have entertained the conception of appointing the Zil-es-Sultan the heir-apparent, because Muzaffer-ed-Din, who fulfills the conditions of the family law (being the son of a princess, while the eldest son is not), has shown himself deficient in strength of character and administrative ability, and has fallen under the influence of the mollahs. The Zil-es-Sultan has established complete order in the southern provinces, so that the local industries have revived and prosperity has succeeded decay. He has organized the only efficient army in Persia, and in wealth and power he stands next to the Shah. This energetic prince is the general choice of the people for the throne when it shall become vacant.

Russian Encroachments.—The advance of the Russians to the Afghan frontier was accompanied with encroachments upon Khorassan, against which the Shah protested ineffectually. The Russian telegraph line from Askabad to Sarakhs traverses Persian territory for a considerable distance. On the left bank of the Heri Rud, between Sarakhs and Zulfikar, the Russians established military posts in accordance with a convention wrung from the Shah, which were not afterward vacated when the specific occasion for occupying those points was removed by the settlement of the Afghan boundary dispute.

PERU, a republic in South America. (For details relating to area, population, etc., see "Annual Cyclopædia" for 1883.)

Government.—The provisional President and Minister of the Interior till the presidential election in March, 1886, is Dr. Eusebio Sanchez, and under his government the chief portfolios were distributed as follows: President of the Council of Ministers and Minister of Foreign Affairs, Señor Arenas; Minister of Justice, Señor Tovar; Minister of War, Señor Manuel Velarde; Minister of Finance, Señor Correa y Santiago. The United States Minister at Lima is Charles W. Buck; the Minister Resident at Washington is Señor J. F. Elmore; and the Consul at New York is J. C. Tracy.

Army.—The Peruvian army is made up mostly of Indians and cholos. It seems to be of little interest to the Indian on which side he fights, for he knows nothing about the political troubles of the country, and serves any commander that happens to capture him.

Navy.—In July the "Santiago," which had recently been acquired by the Government for use as a transport, was renamed the "Peru," and received her crew. During the same month the new Peruvian gunboats "Socrates" and "Diogenes," built in England, left for Callao.

Protestantism.—Although the English Protestant church attached to the British legation at Lima has since 1874 lost its exclusive character, the number of Protestants has increased so much that it proves too small to seat all those desirous of attending, and in September a plot of ground was purchased for £1,700, while the new church to be erected on it will cost £2,000 more.

Events of 1885.—The Government has been beset with interminable difficulties of the most serious kind, the country being impoverished by a long and disastrous war. The rebel chief Cáceres persisted in continuing in arms against the constitutional authorities, and keeping up a sort of ambulant government of his own, recruiting his army among the adventurers from the late war and the Indian population. Hence arose a series of operations in which victory alternated between his forces and the Government troops, Cáceres always succeeding in making good his personal safety, even after the most crushing defeats, and invariably turning up again with a new band of followers. The worst defeat he suffered was at the battle of

Jauja in November, yet, although his army was dispersed, he himself escaped.

Another independent chief of rebels, Dr. Puga, caused the Government a great deal of trouble in the northern provinces early in the year, but was caught in March and shot. In June, Cáceres even threatened Lima with 3,000 men, and peace overtures were made him of the most liberal and equitable kind; but in the mean time Cáceres attacked the Government troops at Jauja on July 4, with heavy losses on both sides, but no result. An armistice ensued, and Cáceres took the peace propositions into consideration, but before the month came to a close he spurned them. On Aug. 15 Cáceres defeated the Government troops at Canta, and Lima was again menaced. Being short of provisions, Cáceres, though but sixty miles from Lima, was compelled to withdraw to Tarma, and there he heard of a revolt of part of his garrison at Arequipa, and a portion of his army was simultaneously repelled at Cajamarca. Cáceres gathered his forces at Jauja and Huancayo, in October, for a decisive struggle, and on Nov. 20 occurred the battle of Jauja, at which Cáceres, with 2,000 men, was defeated so completely that the rebels were dispersed.

Congress.—Congress met on March 1, and indefinitely prolonged the full power of action given to President Iglesias twelve months before. After the battle of Jauja, Cáceres rallied a force and took Chicla by surprise on November 23. He had, at the same time, after his retreat across the river Huaripampa, completely circumvented the Government troops by cutting off the expeditionary force. On Nov. 30 he threatened Lima, and the next day began operations within the walls of the city. President Iglesias and his troops made a stand in its center, where fighting continued till noon, Dec. 2, when it became evident that the invader had been victorious, and through the good offices of the diplomatic corps the basis of a settlement was promptly arrived at, Iglesias and Cáceres both agreeing to renounce executive power. The opposing forces were disbanded, a provisional President and Cabinet were appointed, and a decree was issued for general elections on the second Sunday of March, 1886, Congress to be opened on May 30.

American Treaties.—On April 11 the Secretary of the Treasury at Washington received formal notice that the two treaties of 1870 between the United States and Peru would terminate by notice from the latter, on March 31, 1886. They are known respectively as the treaty of friendship, commerce, and navigation, signed Sept. 6, 1870, and the extradition treaty of Sept. 12, 1870.

The American Commissioners.—The commission appointed by the President to visit the South American countries, in the interest of the commerce of the United States, reported to the Department of State, under date April 25, the result of its observations while at Lima. The commission expressed itself to the following effect:

> The people privately talk of annexation to the United States, the newspapers openly advocate a protectorate over Peru by our Government as the best mode of securing internal peace, and many other suggestions have been advanced in the same spirit. Our commerce with this country has dwindled to almost nothing in comparison with its former magnitude. This is accounted for by the enormous decrease in the purchasing power of Peru, and by the fact that the steamship company that enjoys a monopoly on the west coast of South America uses its influence and regulates its freight tariffs so as to direct trade to England. It is the opinion of every merchant in Peru, and of the members of the Government, that these conditions can not be changed until there is direct communication by steam between the ports of this country and those of the United States. It is said to be cheaper to ship goods from New York by way of Liverpool and Hamburg around the Horn to Callao than by way of the Isthmus, while the passenger pays $375, American gold, for transportation from New York to Valparaiso.

Finance.—The total income of Peru during 1884 was $7,000,000, and on Jan. 1, 1885, there remained a balance in the treasury of $3,000. Neither debts nor loans had been contracted during the year.

On April 16 Congress passed a law reducing debts on mortgages to 50 per cent. of their nominal value, in view of the depreciation in paper currency.

By September the financial straits of the Government had become terrible; harbor and railroad monopolies had been bartered away for years to come, and the money obtained therefrom was spent, together with the funds accruing from the guano claim.

The national treasury stopped the payment of salaries to public functionaries and employés, except the army and navy, many tribunals were closed, and trade, even the retail trade, was hampered for the want of cash and credit.

The Chilian Government issued, Oct. 31, a decree directing the Treasury Department at Santiago to pay to the Peruvian Government $100,000, being its share in the proceeds of the guano-sale. Furthermore, Chili declared to the Peruvian bondholders in Europe that she was quite willing to come to an equitable arrangement with them.

Congress modified notably the appraisement value of some articles of merchandise in the customs tariff, fixing them as follows, as applicable to five of them:

ARTICLES.	Appraisement value.	Duty per metrical cwt. of 100 kilos.
		Per cent.
Petroleum, the litre	$0 15	45
Cigarettes, with package, the kilogramme	3 00	70
Common soap, net, the kilogr	22	70
Beer in bottles, the dozen	3 00	70
Beer in casks, the litre	0 23	70

On other articles the hitherto adopted average appraisement value was taken as a basis, and the duty raised thereon as follows:

On cotton goods	From 25 to 40 per cent.
On woolens	“ 25 “ 40 “
On linen	“ 25 “ 40 “
On silks	“ 30 “ 40 “
On furniture and house-furnishing goods and clothing	“ 35 “ 50 “
On beverages	“ 50 “ 70 “
On drugs and medicines	“ 30 “ 50 “

The new tariff to be in force in 1885–'86.

Coolies.—In January Señor A. Sauri returned to Lima after signing a contract for the establishment of a line of steamers between China and Peru, and the initiation of a stream of immigration, which is to enable farmers and miners to resume work. The project will be at once carried into effect. The system of sale is abolished, and the planters, who in former times had to pay out $200 or $300 to the labor-contractors, will now only have to pay £15 to the steamship company. The wages of the laborers are stipulated at from 60 to 65 cents a day, and they can break their contract, which is for five years, at any moment, by returning £3 for each unelapsed year.

Commerce.—American trade with Peru has been as follows:

FISCAL YEAR.	Import from Peru.	Domestic export to Peru.
1885	$1,764,890	$735,979
1884	2,077,645	1,043,902
1883	2,526,918	487,360

PHARMACY. The year's history in this art has been one of continual progress. The Board of Regents of the University of Iowa decided early in the year to arrange for a school of pharmacy at Iowa City, in connection with their university. The first annual course of lectures was begun on Oct. 28. An examination is required for admission. A department of pharmacy has been formed at the University of Ohio, Columbus, with the appointment of G. B. Kaufmann as Professor of Pharmacy. The State Legislature of Kansas has created a chair of pharmacy at the State University, Lawrence. Entrance examinations were this year demanded at the colleges of pharmacy at Albany, Boston, and New York. Parke, Davis & Co. have established a school of pharmacy in connection with their manufacturing laboratory at Detroit. The course, embracing work in chemistry, pharmacy, systematic botany, pharmacognosy, analytical chemistry, and materia medica, was inaugurated Oct. 28. A free course of weekly lectures on pharmacy and allied subjects, given under the auspices of the Kings County Pharmaceutical Society, was begun in Brooklyn during November. A correspondence school of pharmacy, having the title of National Institute of Pharmacy, located at Chicago, was started early in the year. During 1885, laws regulating the practice of pharmacy were adopted in Kansas, Minnesota, Michigan, and Massachusetts.

The sixth International Pharmaceutical Congress was held at Brussels, Belgium, Aug. 31 to Sept. 5. The presiding officer, under the patronage of the King of Belgium, was D. Van Bastelaer, who was assisted by several vice-presidents from the different nations represented. The Congress was divided into four sections, each of which devoted its attention to the consideration of a special topic, and submitted its decisions to the entire body for final action. The principal subjects considered were the international pharmacopœia, the educational requirements of pharmacists, proprietary articles, and the position of the pharmacist in relation to the adulteration of foods and medicines. The Congress adjourned to meet at Milan, Italy, in 1888. The thirty-third annual meeting of the American Pharmaceutical Association was held at Pittsburg, Pa., from Sept. 8 to Sept. 11. Joseph Robert, of Maryland, was chosen president, and John M. Maisch continued in office as permanent secretary. Providence, R. I., was selected to be the place of meeting in 1886. Numerous local organizations have been formed during the year. The National Retail Druggists' Association's annual meeting was also held at Pittsburg on Sept. 7. During its session a plan of reorganization was adopted, whereby all portions of the country could be represented at its meetings. Edward A. Sayre, of New York, was elected president, and J. W. Colcord, of Massachusetts, remains secretary. The tenth annual meeting of the National Wholesale Drug Association took place at Philadelphia on Oct. 20. Trade interests were thoroughly discussed. The "rebate plan," in some of its modifications, was considered, and resolutions affecting certain points were adopted. M. N. Kline, of Pennsylvania, was chosen president, and A. B. Merriam, of Minnesota, secretary. The Association adjourned to meet in Minneapolis. The "Campion plan," which had promised so well during the early part of 1884, came to an end on Feb. 11. The protection extended to the retailers by this plan depended largely upon their combining together for the purpose of maintaining the prices fixed. Such a combination proved impossible. A retailer within the plan could not successfully compete with his neighbor, who, notwithstanding the organization, was in some way able to obtain goods and sell them below schedule rates. Many of the jobbers withdrew from the Association; others were "cut off"; till finally, at a meeting held in Philadelphia, it was voted that the "Campion plan" be indefinitely suspended. A new coupon plan, devised by Isaac W. Ives, was suggested as a means for the protection of the retailers. It met with some approval at first, but its progress has not been sufficient to warrant much hope of its ultimate success. With the failure of these protective measures, many of the local associations organized for their maintenance passed away. The New York Druggists' Union was succeeded by the New York Drug Association, with W. M. Massey as president, and H. M. Schmid as secretary. The "rebate plan" still finds favor among the jobbers, and bids fair to become a permanent method of business between the producer and the jobber. "The Practice of Pharmacy," by Joseph P. Remington, of Philadelphia, is one of the most important works ever published on the art of pharmacy. Oscar Oldberg is the author of "An Outline of a Course of Study in Practical Pharmacy," a valuable text-book. "List of Tests" is a compilation by Hans M. Wilder, which will be found useful to the pharmacist. "The Southern Pharmacist" is the latest addition to the periodical literature of this subject. The publication of "The Weekly Drug News," "The Chicago Pharmacist," and "The Ephemeris," has been discontinued.

PHYSIOLOGY. The Nervous System.—Investigations have been made by several independent observers of the sense of temperature, from which some very interesting results have been obtained. The measurements of Prof. Eulenberg, made with instruments especially devised for the purpose, showed the existence of a great diversity in the sense in different parts of the body. The sensitiveness of warmth was highest at the forehead and at the dorsal side of the last phalanges, where differences of 0·2° C. were distinctly perceived. The least sensitiveness to warmth was shown at the upper part of the anterior side of the thigh, at the epigastrium, and in the median line of the back, where only differences as large as from 0·9° C. to 1·1° C. were perceived. Sensitiveness to cold was likewise greatest at the forehead, and least at the epigastrium and back; but the degree of sensitiveness to cold did not always correspond with that of sensitiveness to heat at particular parts of the body. Certain spots show more sensitiveness to heat, others to cold. From the circumstance that the sense of temperature is more developed in the hands and face, which are exposed, than in those parts usually covered, the author infers that the more delicate sense of temperature is acquired.

Dr. Goldschneider, working in the same line, has found, by the application of the rounded extremities of metallic needles, that there are a very large number of points or nerve termini in the skin which are sensitive to cold, and others sensitive to warmth. They are unequally distributed over the body, and appear to stand in a certain contrast to the fineness of the sense of touch, being found more rarely where that is very delicate. They appear to be ranged together in the form of chains, of which several, of cold or of warm points, as the case may be, radiate from a definite center on the skin. The chains of cold points never coincide with those of warm ones, but the two sets lie adjacent to each other. Excitement of any of these points, by whatever cause, produces its specific sensation of warmth or cold, not pain. The nerve termini may cease to act in consequence of fatigue and habituation due to repeated stimulations, but, after repose, they come decisively into operation again at the same spots. The number of warm points is less than that of cold points, and there are parts of the skin where there are neither; and some parts contain cold but no warm points, while no part contains warm without adjacent cold points. Dr. Goldschneider agrees with Weber, that a rise in temperature of the skin generates a feeling of warmth by exciting the warm nerve termini, while a depression of temperature creates the feeling of cold by exciting the cold termini. The sense of pressure is also distributed over the skin in its own special points, likewise arranged in chain-like rows which radiate from particular centers; and the localization of the sense of pressure is still finer than that of temperature.

Prof. Eulenberg, repeating Dr. Goldschneider's earlier experiments, found them generally confirmed; and, as a whole, his conclusions, as recited in the paper above quoted, and those of Dr. Goldschneider, were in harmony.

Dr. Blaschko having found, in the course of his investigations into the development of the skin, that the hair-roots are provided with a rich nerve-plexus in the same manner as the touch-corpuscles in the hands and feet, was induced to examine the hairs in respect of their sensibility to pressure. When he took a stiff hair, a little curved at the tip, and stroked the skin with it, he had a sensation only when he touched a fine hair. By this and other means he became convinced that the hair-papillæ possessed a degree of sensibility which entitled them to be placed in a series with the touch-papillæ. While, however, the touch-corpuscles had to be drawn hither and thither over the object to be touched, in the case of the touch-hairs the body had to be waved over them. Dr. Blaschko was, therefore, of opinion that a direct and an indirect, or a papillary and a ciliary, feeling of the skin had to be distinguished. The first performed its functions at the unhaired cutaneous spots—the touch-balls of the hand and the foot, and at the lips—by means of the touch-corpuscles. The indirect or ciliary sensations, on the other hand, were furnished by the fine hairs covering the whole body, which were, properly, touch-hairs. If, at a limited spot of the skin, the fine hairs were shaved away, the delicate sensations of pressure would disappear, and a large hiatus would be perceptible on waving that part of the skin with the stiff hair, at which nothing would be felt.

It has been understood that every proposed theory in respect to the nature of nerve-force must take account of the transmission of a stimulus along the nerve with undiminished intensity, and of the exhaustion of a nerve by continued stimulation. Upon the latter point the experiments of Bernstein, which indicated that, while it took longer to exhaust a nerve than to exhaust a muscle, a nerve may be exhausted by from five to fifteen minutes' tetanic stimulation, have usually been regarded as conclusive. Wedenskii, however, by experiments on the action of a feeble polarizing current upon the nerve, was unable to find any evidence of the exhaustion of the nerve after the tetanic stimulation had continued for six hours. This unexpected resistance of the nerve to what had been supposed to be the exhausting effects of continued activity on irritable tissues suggested the question whether a normal nerve-fiber can be fatigued by any amount of activity. Recent experiments by Prof. H. P. Bowditch upon the nerves of a cat confirm, by a different method of investigation, the results reached by Wedenskii, and give support to the theory that nerve-force is transmitted by some sort of molecular vibration, after the manner of light and electricity.

Prof. Manly Miles has recorded the results of experiments made at the Massachusetts Agricultural College upon the unconscious bias in walking of forty-nine students of the three higher classes in the institution. The subjects experimented upon exhibited many variations in respect to the relative length and strength of their right and left legs, and the dominance of their right and left eyes, as well as in right-handedness and ambidexterity; but these differences did not appear to exercise any definite material effect on the bias; and from these facts the observer concludes that the cause of the bias is not to be found in the mechanical proportions, or relative strength, nor, probably, in the dexterity, of the legs. This bias, he further remarks, "is obviously the result of vital activities, involving complex actions and reactions in the nervous system, which may be defined in general terms, while the details of the obscure changes taking place in the nervous system can not, in the present state of our knowledge, be fully traced. Moreover, it is evident that the phenomena in question must be studied from the same stand-point as other biological processes which can not be explained or expressed by purely physical or chemical conditions."

In his address before the British Association on the phosphorescence of marine animals, Prof. H. C. McIntosh spoke at some length of the cause of the phenomenon. In the Protozoa the structure of the minute and often very numerous creatures which evince phosphorescence, shows that the presence of a definite nervous system is not necessary for its manifestation. The protoplasm of their body is in itself sufficient for its production. Here there are no glands for the secretion of luminous substances, and in many there is evidently no fat which might undergo slow combustion. In the Cœlenterates the phenomenon seems to stand in close relation to nervous processes, though in certain cases the luminous substance possesses peculiar properties. While in certain annelids there exist glands which may effect the secretion of a luminous substance, in some Polynoides the emission of light seems to be due to a peculiarity of the nervous system. In the Crustaceans the luminous property appears to possess the character of a secretion, which is probably under the control of the nervous system. In some animals death occasions the manifestation of phosphorescence. It is hence plain that the cause of the phenomenon is a complex one.

Herr Aronsohn observes, with reference to the experiments of Herr Sachs and himself respecting a heat-center in the cerebellum, that when on a perfectly definite part of that organ he pricked with a needle so deeply as to touch the parts lying under the cortex, he observed a rise of temperature in the rectum, the skin, and the muscles, of from about 1° to 2° C. The prick had to touch the corpus striatum, in its mediate part, in order to produce the rise of temperature. The increased heat continued for about three hours after the prick, and appeared on the two sides even when the wounding of the brain was only one-sided. Electrical stimulation of the same limited spot produced a similar result. Experiments on respiration and determination of the urea showed that immediately after the corpus striatum was pricked, the inhalation of oxygen and exhalation of carbonic acid were increased, and the secretion of urea was augmented.

Special Senses.—The question of physiological pressure in the eye is of much importance, in view of the fact that glaucoma is developed through its pathological increase. By experiments on the eye of the living cat, Herr Grünhagen found that everything increasing the blood-pressure at the same time augmented the intra-ocular pressure, while, on the other hand, everything lowering the pressure in the province of the carotid artery lessened the pressure in the chamber of the eye. Stimulation of the trigemini raised the intra-ocular pressure, as did likewise stimulation of the medulla oblongata. The effect of atropine was a diminution of pressure. A few later observers have yielded like results for the influence of the blood-pressure, and deviating results for the influence of the nerves and the alkaloids. Dr. Höltzke, investigating the effects of three alkaloids, ascertained that esoterine produced at first a considerable augmentation of pressure, and then an abatement of it to a point below the normal; that pilocarpine produced similar but less pronounced results; while atropine called forth quite the contrary effects. In the case of the pressure in the vitreous humor, which is still more directly connected with glaucoma, Dr. Höltzke found it to be always similar to the pressure in the anterior chamber of the eye.

From some experiments made to ascertain the time occupied by the act of accommodation of the eye in vision, Mr. J. W. Barrett concludes that the accommodation apparatus acts with varying degrees of rapidity, according to different circumstances, the principal of which are age, lesions of refraction, practice, individual characteristics, time of day, and fatigue.

Also, that relaxation occurs with very much greater rapidity than actual accommodation; that, with two eyes of much the same refractive character, the accommodation velocity of either, measured separately, is about the same as that of the two acting in concert; and that in the present state of knowledge no absolute data can be given as to the time occupied by the action of the local mechanism for any given distance.

Describing his experiments on the dependence of visual acuteness on light-intensity, Dr. Uhthoff remarks that differences among the eyes examined showed themselves specially under weak light-intensities, and that the minimum of visual acuteness (one thousandth of the normal value) was, in particular cases, still observable with the removal of the petroleum-lamp to the distance of 360 metres. The visual acuteness was further examined under a changing intensity with red and blue light. Red light, just as much as white, showed with increasing intensity a very rapid increase of visual force. The curve in the case of red light was, however, different from that in the case of white light. Under a blue light the visual sharpness very slowly declined with increasing light-intensity.

Kollmann, from his examinations of the tactile apparatus of the foot of man and of the apes, has reached the conclusion that remarkable differences exist between the two in all the parts —differences, moreover, that are much more marked in the lower forms than in the anthropoid apes. In the lower apes (chiromyida and lemurs) the cutaneous ridges lie on a thick bed, and run almost longitudinally to the nails, from which they are separated by a few arches only. In the other lower apes these parallel longitudinal gyri are only found in the middle of the pulp or tips of the fingers, which are termed the tactile balls of the first order; more peripherically, the central straight fasciculi come to be surrounded by elliptic and more circularly arranged ridges. This last arrangement, which is usual in the lower apes, recurs also in the higher anthropoid apes in the tactile balls of the first order. Certain types—as the sinus obliquus, the stria centralis longitudinalis, the vortex duplicatus, and the circulus—all similar to those described in man, occur in the higher apes. In the form of the tactile balls of the second order (situated in the sole of the foot, at the base of the interdigital spaces), and in those of the third order (situated on the thenar and hypothenar eminences), the anthropoid apes resemble man more closely than the lower apes. The lines of these balls often form sinuous rings in man, or at least completely closed figures; but full circles, such as are seen in the lower apes, except that one which is situated just behind the thallux, have not been seen in him. The human foot has but one tactile ball of the third order, and that is situated on the fibular side; in most apes there is one on the tibial side also. In both man and apes the tactile balls are more sensitive than the adjoining parts.

Herr Aronsohn, studying the physiology of the sense of smell, has found that the smallest quantities of clove-oil and bromine, which dissolved in 0·6 per cent. of common-salt solutions, he was yet able to smell distinctly, tallied very well with the most minute quantities which Valentin had found perceptible by the sense of smell in the air. By electrical stimulation of the olfactory nerve he had also been able to call forth distinct sensations of smell in some other persons. The physiological common-salt solution of the temperature of 40° C. had been previously found by him to be entirely indifferent to the olfactory nerves. Were a part of the common salt replaced by other salts, then, according to the nature of the salt, different, mostly somewhat large, quantities of the salt (osmodic equivalents) had to be taken in order to form an indifferent solution. He had now exactly determined these osmodic equivalents for a series of salts. Finally, in order to demonstrate that there were special fibers in the olfactories for special smells, he had dulled his own sense for a certain quality of odors, that, namely, of sulphuret of ammonium, and had convinced himself that, though no longer able to perceive this smell, he was yet very well able to smell ethereal oils.

Prof. John B. Haycraft has described before the London Physiological Society some experiments with the sense of touch, which were made with especial reference to the quality of roughness. It is generally supposed that, although the eye is only capable of perceiving separately some fifteen or twenty stimuli in a second, a far greater number may be applied to the ear or the skin, and be heard and felt, each by itself. Helmholtz has been generally misquoted, and the statement that 132 "beats" a second can be separately heard, continually appears in the text-books. Still more absurd is the assertion that 1,400 impacts of a toothed wheel may be separately felt. In point of fact it is found in every case that 20 or 30 impacts are fused together. When from 30 to 1,400 impacts fall upon the finger-tip, we are conscious of a feeling of "roughness." We know by the aid of sight that this sensation is due to rapid tactile stimulation, but by nothing in the sensation itself. Rapid beats produce in like manner a rough sound, the cause of dissonance in music. In both cases the "rough" sensation varies in quality, becoming of a finer roughness with more rapid stimulation. This cause of the sensation can not be analyzed any more than with a sensation of redness, except by experiment and the use of the other senses. Thus, the sensation produced by 132 beats per second is recognized as being caused by rapid beats only, because the experimenter has traced the continuity of his feelings from a point where the intermittent character of the cause was evident. The sensations produced by 1,400 impacts of a toothed wheel is but a finer quality of the roughness produced by 30. We can no more be said to distinguish 1,400 impacts upon the finger-tip than to distinguish 256 vibrations when the middle C is sounded upon the piano, although we may know experimentally that exactly that number of vibrations stimulate the ear. Let us compare this sense of roughness with other sensations. In sight we have a compass of less than one octave, in hearing about eleven octaves. Counting 30 as the lower and 1,400 as the higher number of impacts, we have about five octaves of roughness. The utility of this compass will, however, depend on the smallness of difference in quality which it is possible to distinguish. Very practiced musicians are said to distinguish one sixtieth of a tone; most persons far less. The author exhibited an instrument intended to aid in the investigation of the point under discussion, upon which he said it was easy to calculate positions in which the fingers will be stimulated with the difference of any ordinary musical interval.

The Circulatory System.— Drs. Henry Sewall and D. W. Steiner, of the University of Michigan, have made studies of the action of the depressor nerve and of the effect of blood-pressure upon the heart regarded as a sensory organ, from which they infer that we may regard the physiological relation of blood-pressure to cardiac inhibition in a threefold light: first, increase of arterial pressure directly stimulates the inhibitory center in the medulla; second, the same condition, by increasing resistance to the heart's action, excites the inhibitory center direct through the depressor nerve; and, third, elevation of arterial pressure brought about by constriction of the peripheral blood-vessels lessens the distention of the cardiac walls, in which condition there is good reason to believe the local inhibitory apparatus is more susceptible to influences reaching it from without. They say, summing up the main results of their work: "When the carotid arteries are simply clamped, there is not a very considerable rise of blood-pressure; but when the same operation is performed after previous section of the depressor nerves, the rise of pressure is very much greater, amounting to from 30 to 75 per cent. of the normal blood-pressure. The fibers of the depressor nerve, through which reflex inhibition of the heart may be brought about, are stimulated at their peripheral endings by the condition produced in the heart by high arterial blood-pressure; and the coincident lowering of intra-cardiac pressure probably makes the heart more sensitive to inhibitory influences proceeding along the pneumogastric nerves."

Nussbaum has published observations tending to show that there is in the animals he experimented upon a double supply of blood to the kidneys: first, by the renal arteries running specially to the glomeruli; and, second, by the renal portal vein and the lumbar veins. He concluded also that circulation through the glomeruli could be wholly stopped by ligaturing the renal arteries, and, believing that these properties of the organ afforded a means of determining the place of secretion of normal and abnormal constituents of the urine, he endeavored to determine the constituents which are secreted by the glomeruli and by the convoluted tubes respectively. Nussbaum's results have been generally accepted; but J. G. Adami recently, in repeating his experiments, was unable to obtain his results, and more extended observations led to the conclusion that the anatomical basis of his work was not sound, and his method was not suited for any exact determination of the passage of substances through the kidneys. Mr. Adami's own experiments on the nature of the glomerular activity show that the arterial supply of the kidneys may be cut off, and nevertheless, a collateral circulation being set up, a certain amount of blood-flow will be going on through the glomeruli. It probably takes place through branches of the renal artery running direct to the capillary net-work round the tubules. The phenomena are such as can be fully accounted for on the supposition that a gradually improving circulation of this kind in connection with the glomeruli has been established. The details of the experiments also go to show that the glomerular epithelium may be regarded as possessing powers of a selective secretory nature; that a diuretic may exert a direct action upon the glomerular epithelium; and that the secretion of albumen out of the blood by the glomerular epithelium may occur in normal conditions.

In experiments on the connection between the coloring-matters of blood, bile, and urine, C. A. MacMunn has found that chloroform furnishes an excellent means of separating the acid hæmatin formed by the action of alcohol acidulated with sulphuric acid upon blood, and describes, in the "Journal of Physiology," a process by which he applies that agent. At the conclusion of the operation there is left as a residue a dark-brown pigment, soluble in alcohol, ether, chloroform, aqueous alkaline solutions, and bisulphide of carbon, and insoluble in petroleum and water. If left alone for some time, it dries up into a bluish-black powder. This residue can be used for preparing solutions showing the spectra of acid hæmatin, alkaline hæmatin, hæmochromogen, and hæmato-porphyrin, according to the solvents and reagents to which it is exposed. In the bile of the sheep and ox the author has found a pigment which he considers should be distinguished from other pigments, and he gives it the name of cholohæmatin. In the same paper in which these results are given, Mr. MacMunn describes his investigations of the coloring-matters in bile from a biliary fistula and the coloring-matters of fæces and urine.

Prof. Du Bois-Reymond, speaking of the difficulty of determining the blood-pressure in the capillary vessels, remarks that the exact state of the case can be determined only under ideal conditions. In the current of an incompressible and inexpansible fluid through a system of pipes under a given propelling force, the rate of current is always in inverse proportion to the cross-section, while, with the distance of the propelling force, the pressure abates at a rate proportionate to the distance—i. e., it sinks more rapidly in narrow, and more slowly in wide, tubes. In the middle of the capillary system, the pressure, according to known laws, amounts to half the initial pressure. In the circulation of the blood, the cross-sections of only the larger arteries and veins are known; the cross-section of the capillary system is unknown. Under the ideal conditions, however, this cross-section might be calculated from measurable rates of current. Thus, it may be calculated that the diameter of the capillary system is 25 times, and the whole section 625 times, that of the aorta. The curve of pressure sinks slowly in the arterial system; but in the capillaries, on account of the great difference of pressure required by the great resistance, it sinks very considerably, to sink more slowly in the veins, till in the neighborhood of the heart it becomes negative. In the middle of the capillary system the pressure, in accordance with this view, was equal to half the pressure in the ventricle. Should the arteries become narrower by contraction of their smooth muscle-fibers, the point where the pressure was equal to half the heart's pressure would shift nearer to the arterial system; if, on the other hand, contractions or obstructions occurred in the veins, that point would come closer to the venous system.

Various opinions have been arrived at by different observers concerning the influence of the organic constituents of the blood upon the contractility of the ventricle, and as to whether the heart can feed on its own tissues. Dr. S. Ringer declares that, from experiments which he has made upon the effects of different salts on the period of contractility, he is "driven to the conclusion that there is most probably stored up in the muscular tissue material to carry on contractions; that this material can not be washed out by a fluid circulating through the cavities of the heart, and that the amount of the stored-up material varies with the time of year and the condition of the frog." From other experiments he believes he can show that blood or serum is quite inadequate to maintain the heart's contractility unaided by inorganic substances, such as lime and potassium salts, in addition to sodium chloride and an alkaline sodium salt; but that, when the circulating fluid contains a sufficient quantity of these salts, a very small quantity of blood, fresh or dried, serum, or milk, is sufficient to sustain contractility for many hours. He has found that the effect of blood added to circulating fluid is not dependent on the fats it contains; that milk effectively sustains the contractility of the ventricle; and that gelatin helps greatly to sustain it, but is decidedly inferior to blood. Dr. Ringer also records the results of his experiments with "tap-water" (New River, London), which contains thirty-eight parts per million of organic matter, when substituted for distilled water in the circulating fluid. The effect was greatly to increase the sustaining action of the fluid. Experiments made to ascertain whether this superiority was due to the minute quantity of the organic matter contained in it, or to inorganic constituents, showed that while circulating fluid containing one part of dried blood in 12,000 will long sustain contractility, it is decidedly inferior to "tap-water" circulating fluid containing only one part of organic matter in 25,000. Further experiments in detail showed that much of the efficiency of "tap-water" is probably but not entirely due to its lime sulphate. But experiments with artificial fluids containing calcium sulphate and calcium bicarbonate failed to exhibit the positive results afforded by "tap-water."

The Digestive System.—Prof. Ewald spoke in the Physiological Society of Berlin, March 27, concerning the occurrence of lactic acid in human gastric juice, which was now universally regarded as a pathological formation, or a product of fermenting processes which did not obtain under normal conditions. In conformity with this opinion he had, in a former paper, clearly demonstrated the absence of lactic acid, even after milk had been taken. On the other hand, he had regularly found hydrochloric acid in the gastric juice. From more recent experiments which he had had opportunity to make in cases of hysteric vomiting, he inferred that lactic acid occurred normally in the contents of the stomach, namely, in the first period of digestion. It was, however, in his opinion, no normal constituent of the gastric juice, but, in the case of a mixed and meat diet, originated in the carno-lactic acid obtained from the meat, and, in the case of white bread being taken, from the fermentation of the starch. With reference to the ultimate uses of lactic acid, the speaker agreed with Prof. Maly, that it was employed toward the formation of the free hydrochloric acid afterward appearing in the gastric juice.

"The Lancet" calls attention to some physiological facts in relation to drinking as of much importance, because they concern the promotion of health. Thus, it is essential that there should be constantly passing through the organism a flushing, as it were, of fluid, to hold in solution and wash away the products of disassimilation and waste. As fully three quarters of the entire organism are normally composed of fluid, there is evidently great need of a copious supply of it. If there be not sufficient endosmose, the exosmose must be restricted, and effete matters, soluble in themselves, but not dissolved because of the deficiency of the fluid available, will be retained. Thus uric acid requires some eight thousand times its bulk of water at the temperature of the blood to hold it in solution; and if it be not dissolved it speedily crystallizes, with disastrous consequences in the shape of disease. Not less than three and a half pints of fluid should be consumed by any person every twenty-four hours, and, when the body is bulky, four or even five pints should be the average. The fluid should be chiefly either pure water or water in which the simplest extracts are held in solution. Fluid heavily charged with solid matter can not fairly be expected so entirely to rid itself of this burden in the process of digestion and absorption as to be available for solvent purposes generally. Another urgent reason for drinking freely of bland fluids is to be found in the need of diluents—something slightly different from mere solution. Many of the solids of the tissue waste are of a nature to irritate and even disorganize the kidney if they be brought to that organ for excretion in too concentrated a form. There is no reason to suppose that the kidneys are liable to suffer from overwork if the specific excreting power of their cells be not too heavily taxed. If only the products of disassimilation be diluted, so that they can be passed through the kidney by the simple process of exosmosis, the organ will discharge its function without injury or exhaustion. As a matter of fact and experience, those who drink innocuous and unstimulating fluids freely do not suffer from kidney trouble.

The fact that the woody fiber which is consumed in large amounts by herbivorous animals is digested to a considerable extent, long suspected, has been experimentally proved by the researches of Hofmeister and Tappeiner. Hofmeister showed that digestion of cellulose took place in the rumen of the sheep; also that the fluid from the rumen of a freshly killed sheep and the mixed saliva had this power. Experiments with the fluids of other animals resulted differently. Tappeiner's experiments indicated that the digestion is effected by a fermentative process, with the evolution, in certain cases, of carbonic acid and marsh gas, and in other cases of carbonic acid and hydrogen. From these experiments, and from examinations of the breath of sheep, it is estimated that the digested cellulose sets free in the body of the animal 96½ per cent. of the energy that the same weight of starch would do.

R. H. Chittenden and George W. Cummins have published accounts of experiments they have made, by artificial digestion, upon the relative digestibility of fish-flesh in gastric juice. They used for gastric juice a solution of five grammes of pepsin in one litre of dilute hydrochloric acid. In this they placed, in two portions for each experiment, weighed and equal portions of carefully prepared fish-flesh which had been cooked, and exposed it to a temperature of from 38° to 40° C. for twenty-two hours, with occasional stirring. The results of the experiments, which the authors have represented in elaborately detailed tables, show that the average digestibility of fish-flesh is far below that of beef similarly cooked. In but two instances, in the cases of shad and of lake white-fish, does the digestibility of fish-flesh approach that of beef, though, from the average of the experiments, several fish are as easily digestible as mutton, lamb, and chicken. Fish with white flesh appear to be more easy of digestion than those with more or less red flesh. The difference between the digestibility of the light and dark meat of the same fish is somewhat striking. A similar difference, though very much smaller, is to be noticed between the light and dark flesh of the chicken. This difference in digestibility is in part due, without doubt, to the amount of fat present, but not always, for the flesh of fresh cod contains but little fat, yet it was one of the most indigestible of the white fish experimented with. These results agree, generally, with those obtained by Pavy from similar experiments.

The Glandular System.—In a discussion in the Physiological Society of Berlin on the functions of the sebaceous glands, Prof. Fritsch controverted the hypothesis of Herr Una and others, that these glands served only to lubricate the hairs, while the globiform glands, commonly called the sudoriparous glands, lubricate the skin and induce the formation of subcutaneous fat, and that the perspiration is discharged into the sweat-pores, or, rather, into the extreme ends of the straight canals into which the sweat finds its way out from intercellular spaces through the stomata. He was sustained, in general, by Prof. Du Bois-Reymond, Prof. Waldeyer, Dr. Gad, and Dr. Lassar, who maintained that all known observations and experiments were to the contrary of this hypothesis, and in favor of the view that the sebaceous glands provide fat for the skin, while the globiform glands have the production of sweat assigned to them.

It has been ascertained by the labors of Ludwig, Heidenhain, and Nussbaum, that the kidney-tubules, where lined by cells containing protoplasm, are differentiated in their function from the thin-walled Malpighian capsules at the extremities of the tubules; and it is generally accepted that the capsule serves simply as a diffusion and filtration membrane through which pass water and inorganic salts, which make up the bulk of the urine, while the large-bodied cells of the tubules, particularly of the convoluted portions, may be looked on as true secretory mechanisms, which have the power of actively selecting substances, as urea and urates, from the lymph, and probably also of manufacturing specific products. Dr. Dreser has extended the evidences for the differentiation of function between these two parts of the secretory mechanism of the kidney, from the results of his experiments on frogs, which indicate that the fluid passed through the capsules of the kidney is alkaline, while that secreted by the convoluted portion of the tubules is acid in its reaction.

The functions of the thyroid gland have been imperfectly understood; but recent researches have shown that it has an intimate and important relation with the functions of the brain. Thus, when the gland has been extirpated for gôitre, it has been observed that the subjects steadily lose their mental vigor, the features grow heavy, and the speech slow and dull, the muscular system weakens, the skin turns rough, thick, and hard, and the patient becomes a cretin; but the preservation of the smallest part of the gland prevents these effects. Similar results have been obtained from experiments on dogs and cats, which, after the gland has been removed, are attacked with convulsions, somnolence, and paralysis, and soon die. To account for the relations of this organ to the brain, Liebermeister supposes that the thyroid gland is the regulatory organ of the encephalic circulation, and that its abstraction throws this into chronic disorder. Prof. Bruns, of Tübingen, believes that the gland is either a depuratory which excretes certain substances poisonous to the nervous system, or that it fabricates certain substances indispensable to nervous vigor.

The Muscular System.—Mr. B. Melland has demonstrated, by certain methods of gold-staining, that an intra-cellular net-work is present in the muscle-fiber of dytiscus, the bee, frog, lobster, crayfish, and rat. The net-work may also be shown, but not so completely, in the living fiber, and in acetic and osmic acid preparations. Crossing the fiber transversely, united to the sarcolemma, and more or less separating the muscle-fiber into compartments, are network partitions — the transverse net-works. Running longitudinally down each compartment, and joining the dots at the intersections of the fibers of the transverse net-work, is a series of fine rods. This structure serves to explain the transverse striation and other complicated appearances presented by the muscle-fiber, and brings into harmony many of the conflicting statements of histologists on the subject.

The sound heard on auscultating a continuously contracting skeletal muscle has generally been ascribed to certain vibrations of the active tissue of such periodicity as to give rise to a tone of from 36 to 40 waves per second. The theory that the normal muscle-sound might be said to have a relationship to a musical tone has been urged as an important link in the evidence tending to prove that normal nerve impulse is intermittent, and that continuous voluntary contraction is composed of summated single contractions like the artificial tetanus produced by interrupted stimulations. Further, the fact that the heart-beat is but a single contraction is urged against the view that the systolic sound is due to muscular tone, because it is commonly accepted that the sound produced by contracting skeletal muscles depends upon the regular variations of tension of the tetanic contraction. Believing that this explanation of the muscular sound is accredited with a degree of certainty that the facts of the case do not warrant, Drs. E. F. Herroun and G. F. Yeo performed a number of experiments by means of the stethoscope upon certain skeletal muscles, the conclusions derived from which they thus summarize: 1. That a single contraction of a skeletal or heart muscle gives rise to motions or vibrations which evoke the resonant tone of the membrana tympani in the same manner as the tetanic or voluntary contraction. 2. That the tone heard in voluntary contraction is no evidence of distinct or regular vibrations in the muscle, but merely of motions regular or irregular which produce the vibration of the membrana tympani. 3. That the tone heard in voluntary contraction is therefore no evidence of regular discontinuity of natural nerve impulses, but simply depends upon trembling movements due to variations either of force or distribution of stimulation. 4. That the objection to the first heart-sound being a muscular sound because the systole of the heart is a single contraction, is not valid, since the single contraction of a muscle causes motions or vibrations which call forth the resonant tone of the ear.

Vegetable Physiology.—The fact of a direct continuity between the protoplasmic contents of adjacent cells is an important factor in plant histology, and has only recently been established. The individuality of the plant-cells, defended by Schleiden, was first criticised by Hofmeister, and more positively and later by Sachs. For Sachs, and also for Strasburger, the plant is only one cohering protoplasmic entity. Nageli also supposes that the protoplasm of each cell is in direct communication with that of the other cells, by means of delicate protoplasmic filaments. These views are supported by the positive observations of numerous investigators, beginning with Theodor Hartig, in 1854, whose conclusions are confirmed in papers by Terletzki, and Dr. Jules Schaarschmidt, of the Royal Hungarian University at Kolosvár. The results of the last-named author's investigations, and a general history of the subject, are given in "Nature" for Jan. 29, 1885.

Prof. W. O. Atwater has made a series of experiments to determine whether plants, grown under normal conditions, acquire any considerable amount of nitrogen, free or combined, from the ambient atmosphere; and how the acquisition of nitrogen from the air is affected by abnormal conditions of growth. The experiments were made by growing peas in sand which had been purified by washing and igniting, and to which were applied nutritive solutions containing known quantities of nitrogen. The amounts of nitrogen supplied in nutritive solutions and seed were compared with the amounts found at the end of the experiment in the residual solution and plants. The excess of the latter amount over the former, which was in some cases very large, must represent nitrogen acquired in some way from the atmosphere. In a second series of experiments, the conditions of growth were varied by varying the concentration of the nutritive solutions; by varying the total quantity of food supplied to the roots by the solutions, from an amount seemingly sufficient, or nearly so, for normal growth, to a very scanty supply; and by varying the proportion of nitrogen in the solution. The results of the experiments showed that the plants grown in nutritive solutions (containing potassium and calcium nitrates, potassium phosphate, magnesium sulphate, and ferric chloride), exposed to the air, but protected from rain and dew, contained at maturity more nitrogen than was supplied them in nutritive solution and seed. For this excess of nitrogen there was but one possible source, namely, the atmosphere. Under variations of the conditions of growth, the gain of nitrogen was always largest when the conditions of growth were most nearly normal, and smaller as either condition was made abnormal. The amount of nitrogen acquired from the atmosphere rose and fell with the amount of food at the disposal of the roots, being largest where the plants were tolerably well fed, and smallest where the food-supply was inadequate. So, likewise, where the supply of nitrogen varied, the amount of mineral food remaining the same, the plants acquired more or less aërial nitrogen in proportion as more or less nitrogen was supplied to them in the nutritive solution. In the trials which were made with solutions sufficiently dilute to permit normal assimilation, the very poorly-fed plants obtained one third, and the tolerably well-fed ones one half of their whole nitrogen from the air. How and in what form this nitrogen was acquired, says Prof. Atwater, the experiments do not tell. "It must have come to the plants as either combined nitrogen—ammonia, nitric or nitrous acid—or as free nitrogen. It must have been either taken directly by the foliage, or first absorbed by the nutritive solution and communicated by it to roots. That the whole, or indeed any considerable portion, could have been gathered from the air and conveyed to the plants by the nutritive solution, which was neutral or slightly alkaline during growth, is, to say the least, in direct apparent contradiction with the best experimental evidence at hand. The hypothesis of the absorption of any considerable quantity of combined nitrogen by the leaves of the plants is directly opposed as well to the testimony of the most reliable experiments upon the subject as to the seemingly unanimous opinion of the men who have made them. The only remaining hypothesis is that of the assimilation of the free nitrogen of the air by the plants. This is likewise contrary to the results of the best investigations. A way out of the difficulty may, perhaps, be found in the observation by Berthelot of the assimilation of free nitrogen by vegetable matter through the aid of electricity of a potential similar to that which obtains in the air near the surface of the earth; an agency which may have been excluded in the experiments which are most decisive against the assimilation of free nitrogen."

Bibliography.—The most important physiological publication of the year is Dr. Stirling's translation of the treatise of Landois. R. Blanchard has published the first part of a work on "Medical Zoölogy." Vogt has written a "Comparative Anatomy," and Colin has prepared a new and improved edition of his "Comparative Physiology." Continued additions have been made to the general stock of knowledge in the successive publications of the results of the Challenger Expedition, under the direction of Dr. Murray, which are to appear in a series running up to fifteen or more volumes. Retzius has completed his great work on the "Anatomy of the Ear." F. Leydig has written an elaborate account, enriched with original observations, of "Cells and Tissues." Among the shorter memoirs and papers of a more special character are those of Zacharias on the nucleoli of cells; of Henhum, of Stockholm, on the forms of cells and the appearance they present in section; Fleischl's device of a hæmometer, or instrument for determining, by the colorimetric method, the globular richness of the blood; the experiments of Otto on the number and richness in hæmoglobin of the corpuscles of the blood in men and women respectively; and of Munk on the mode of absorption and the origin and mode of deposition of fat in the body. Bearing upon the nervous system are Christiani's studies in the "Physiology of the Brain," especially in reference to the relations of the hemispheres to the power of sight, and to the existence of two centers of respiration, one inspiratory and pupil-dilating, and the other expiratory and pupil-contracting; the observations and experiments of Ott, Richet, Aronsohn, and Sachs, on the presence of a heat-center of the brain; Exner's observations on the localization of the visual center, which support those of Christiani, and are in opposition to those of Munk, Dalton, Ferrier, Luciani, and others; the studies of Kirchhoff in localizing the ano-vesical center in man; of Bechterew, Edinger, and Flechsig, on the constitution and development of the posterior columns of the cord; and of Sandemann on the ultimate distribution of motor nerves. Ewald and Boas have investigated the presence of lactic acid along with the products of digestion. Prof. Maggiorani has made experiments on the influence of powerful magnetic currents on the development of the egg of the fowl. The rapid progress of histological research has suggested a more frequent publication of the "Quarterly Journal of Microscopic Science." Among the articles that appeared in this branch during the year were those of Sedgwick on "Peripatus Capensis"; of Lowne, in the Linnæan "Transactions," and of Hickson, in the "Journal of Microscopical Science," on the "Eyes of Insects"; of Harmer, on the "Development of Loxosoma"; and of Kingsley, on the "Embryology of Limulus."

PORTUGAL, a monarchy in the south of Europe. The legislature, called the Cortes, is composed of a Chamber of Peers, consisting of 162 members nominated for life, and a Chamber of Deputies, containing 173 members, elected by the people. The reigning King is Luis I, born in 1838, son of Queen Maria II and Duke Ferdinand of Saxe-Coburg. (For ministry, see "Annual Cyclopædia" for 1884. For area and population, see "Annual Cyclopædia" for 1883.)

Commerce.—Great Britain takes about 45 per cent. of the exports, chiefly wine, and has about the same share in the import trade. The imports from the United States in 1881 were valued at 5,452,000 milreis (the milreis = $1.08); the exports to the United States at 644,000 milreis. The values of the imports and exports of the various classes of merchandise in 1884 were as follow, in milreis:

ARTICLES.	Imports.	Exports.
Cereals	6,197,000	281,000
Seeds, fruits, etc.	754,000	1,512,000
Colonial produce	3,091,000	96,000
Wines and liquors	141,000	10,712,000
Animal products	4.352,000	3,559,000
Minerals	2,399,000	1,284,000
Metals	5,341,000	510,000
Skins and leather	2,441,000	168,000
Timber, etc	1,045,000	2,778,000
Pottery and glass	293,000	17,000
Textiles and textile materials	5.609,000	169,000
Miscellaneous manufactures	3,325,000	440,000
Drugs, etc	390,000	338,000
Total	35,378,000	21,864,000

Railroads, Posts, and Telegraphs.—The length of railroads in operation Jan. 1, 1884, was 950 miles, of which 180 were worked by the state. There were 300 miles under construction.

The number of letters carried in 1883 was 15,229,321, besides 1,790,739 foreign letters received and 1,897,550 sent out.

The length of state telegraph lines at the end of 1883 was 3,045 miles, of wires 7,255 miles. The number of paid dispatches in 1883 was 692,881, of which 413,251 were internal; the receipts were 209,882 milreis.

Finances.—The revenue in 1883–'84 amounted to 35,078 contos of reis, or $37,885,255, including 4,089 contos of extraordinary receipts; the expenditure was 36,464 contos, or $39,381,576, of which sum 4,446 contos represented extraordinary expenditures. The budget for 1885–'86 makes the total receipts 31,963 contos, of which 6,292 are derived from direct imposts, 16,606 from indirect taxation, 1,064 from additional taxation under the law of 1882, 3,590 from public property, and 1,085 represent items of account. The total expenditures are set down as 38,256 contos, including 4,940 for extraordinary purposes.

The nominal capital of the public debt on June 30, 1884, was 430,856 contos of reis, or $465,126,391. The internal debt, refunded at 3 per cent., amounted to 235,671 contos, the foreign debt to £43,374,577, or 195,185 contos.

Army and Navy.—The army is undergoing a reorganization under the edict of Oct. 30, 1884, and the law of May 6, 1885. All men, save legal exceptions, are required to serve in the army or the marine from the age of twenty-one. The period of service is three years with the colors, five in the first, and four in the second reserve. The effective of the army on July 1, 1885, was 35,775 officers and men on the peace footing, and on the war footing 125,057 of all ranks, with 7,821 horses, 41,266 mules, and 264 guns. The troops maintained in the colonies, not included in the above statement, were 8,826 men of all ranks, besides the indigenous reserves.

The war fleet in 1885 consisted of an iron-clad corvette, a cruiser corvette, twelve gun-boats, and minor craft.

Colonies.—(For area and population of the colonies, see "Annual Cyclopædia" for 1884.) The total revenue of the colonies in 1884–'85 was about $3,000,000, and the expenditure $3,100,000. The possessions of Portugal were increased by the territories conceded to her at the mouth of the Congo (see CONGO FREE STATE), and by other points on the western coast recently reoccupied. Although slavery was abolished by the Cortes in 1878, a disguised species of slavery exists in the African colonies. The slaves are bought on the Guinea coast and taken to the Portuguese plantations, ostensibly under voluntary contracts; but the contract is an empty form. They receive no pay, and are kept in perpetual slavery.

The Postal Congress.—A Congress of the Universal Postal Union was held in Lisbon in March. The Congress resolved to maintain the provisions of the Paris Convention, and to admit reply post-cards to the benefits of the convention. A suggestion of the French postmaster-general, to establish an international service of postal savings-banks, was warmly approved by many of the delegates. International arrangements are already in operation between France, Belgium, and Holland. The Congress resolved in favor of calling a special conference on the subject as soon as the bureau in Bern can elaborate the scheme. The next Congress will be held in Vienna in 1890.

POSTAL ROUTE, AMERICAN. See page 61.

PRESBYTERIANS. I. Presbyterian Church in the United States of America.—The following is the comparative summary of the Presbyterian Church in the United States of America for 1884–'85, as presented by the stated clerk of the General Assembly:

	1884.	1885.
Synods	24	25
Presbyteries	190	196
Candidates	733	839
Licentiates	275	322
Ministers	5,341	5,574
Licensures	26	161
Ordinations	150	130
Installations	402	420
Pastoral dissolutions	295	826
Ministers received	85	81
Ministers dismissed	29	19
Ministers deceased	93	104
Elders	19,968	20,272
Deacons	6,287	6,472
Churches	5,973	6,093
organized	168	177
dissolved	63	68
received	3	8
dismissed	1	1
Added on examination	34,938	42,972
certificate	26,801	27,516
Communicants	615,942	643,735
Baptisms, adults	11,942	15,191
infants	19,483	21,012
Sunday-school members	687,269	719,723
CONTRIBUTIONS:		
Home missions	$620,023	$632,906
Foreign missions	550,220	548,633
Education	118,956	115,873
Publication	35,907	34,218
Church erection	193,047	159,050
Relief fund	80,288	83,924
Freedmen	86,452	97,629
Sustentation	24,845	21,410
Aid for colleges	76,415	85,471
General Assembly	51,037	55,200
Congregational	7,355,791	7,541,017
Miscellaneous	976,420	922,855
Total	$10,169,401	$10,298,186

As reported to the General Assembly in May, the receipts of the Board of Ministerial Relief for the year had been $103,745, of which $82,664 had been from contributions, and $15,199 from the permanent fund, and $5,882 were represented by boxes of clothing. The board had given aid to 204 ministers, 279 widows, and 23 families, and had the care of a Ministers' Home at Perth Amboy, N. J.

The Board of Aid for Colleges had received $40,049, and had aided 21 institutions.

The Board of Education returned its receipts at $72,733, or $4,500 more than the receipts of the preceding year. The increase of candidates needing help had, however, been so great that a slight reduction of the allowances to each had been made necessary. The board had under its care 619 young men, of whom 104 were colored students.

The Board of Church Extension had received $120,696, and had appropriated $108,042 in aid of 240 churches building houses of worship.

The Board of Home Missions reported to the General Assembly that its total receipts for the year had been $498,890, or $28,000 more than had been received during the previous year. The board was, nevertheless, in debt to the amount of $110,000. Of the amount received, $124,523 had been contributed through the Woman's Board of Home Missions. The board supported wholly, or in part, 1,435 ministers and 175 teachers; had under its care congregations representing an aggregate of 150,000 persons; 2,113 Sunday schools, having 135,000 members; church edifices valued at $4,384,940, and parsonages valued at $412,324. One hundred and ninety-five new churches and 380 Sunday schools had been organized, and 15,818 members had been added to the churches.

The Board of Missions to Freedmen had received $116,220, $17,254 of which had been given by the colored churches. It had under its care 198 churches, with 11,372 communicants, and 194 Sunday schools, with 13,349 pupils.

The receipts of the Board of Foreign Missions had been $757,635. It employed 446 ordained ministers and 1,114 lay missionaries, and returned 21,073 communicants in its mission churches. The missions are: Among the Indian tribes in the United States (Senecas, Chippewas, Omahas, Dakotas, Creeks, Seminoles, Nez-Perces, Winnebagoes, Iowas and Sacs, Choctaws, and Sacs and Foxes); in Mexico, the United States of Colombia, Brazil, and Chili; Africa; India; Laos; China; Japan; Corea; Persia; and Syria.

The General Assembly of the Presbyterian Church in the United States of America met in Cincinnati, Ohio, May 21. The Rev. Elijah R. Craven, D. D., of Newark, N. J., was chosen moderator. The topic of discussion which awakened most interest was that of the validity of Roman Catholic baptism, which came up for direct decision in a case of appeal to the Assembly, and was also brought before it in resolutions seeking a formal deliverance on the subject. The case brought upon appeal was one in which a person who had been baptized in a Roman Catholic church, applying for membership in a church of the Synod of New York, was required to be rebaptized before being admitted to the ordinance of the Lord's Supper. A member of the session complained to the Presbytery, but that body failed to entertain the complaint. It was next carried to the Synod, which also declined to entertain it, and was then brought before the General Assembly. This body decided that its former deliverances left the matter of the admission of Roman Catholics with the synods severally, and decided not to entertain the appeal. The same subject was brought up in a resolution offered by Judge C. D. Drake, affirming it to be the deliberate and decided judgment of the Assembly "that the Roman Catholic Church has essentially apostatized from the religion of the Lord Jesus Christ, and therefore can not be recognized as a Christian church; and as we do not recognize it as a portion of the visible Church of Christ, we can not consistently view its priesthood as other than a usurpation of the sacred functions of the ministry, its ordinances as unscriptural, and its baptism as totally invalid."

Another resolution was offered by the Rev. Dr. Philip Schaff, declaring "that it is the deliberate and decided judgment of this Assembly, in full accord with the Reformed confessions and the theory and practice of all the Reformers and Westminster divines, that the Roman Catholic Church, though corrupt, and teaching many unscriptural errors, yet retaining the Holy Scriptures and ancient creeds, with all the fundamental truths of Christianity, is still a branch of the visible Church of Christ, and therefore that the sacrament of baptism administered by her, in the name of the Holy Trinity, the Father, Son, and Holy Ghost, and with the intention to baptize, is true and valid Christian baptism, which can not and ought not to be repeated."

A third resolution was offered by the Rev. Alfred Yeomans, D. D., to the effect "that it is the decision of the General Assembly that its last deliverances on the subject of Romish baptism, leaving the question of rebaptism to the discretion of the session in which the question may arise, does recognize the validity of such baptism; and, while it does not enjoin upon the session the admission of Roman Catholics into their communion without rebaptizing, this Assembly reaffirms the decision of 1875 as its deliverance at this time."

After discussion of these resolutions, the whole subject was laid on the table. A plan for the reduction of representation in the General Assembly was approved, under the operation of which the body will at first be constituted of less than 450 members.

Provision was made for the appointment by the synods and by the General Assembly of judicial commissions, whose decisions shall be final except upon matters involving questions of law or doctrine. It was resolved that when any church shall decide to elect ruling elders for a limited time, in accordance with the action of previous General Assemblies, the same regulation, as to mode of election and term of service, may apply to deacons also. The section of the new Book of Discipline which provides that a church may erase from its roll the name of a member not chargeable with immoral conduct, who requests that that be done on the ground that his views have so changed that his conscience will not allow him to partake of the Lord's Supper, a proposition to omit which had been before the presbyteries, was retained. The Philadelphia Presbytery of the Reformed Presbyterian Church was received into connection with the Assembly, with the understanding that it may retain all of its distinctive doctrines. A new synod was created, to be called the Synod of Northern Dakota. A committee was appointed to arrange for the celebration of the one hundredth anniversary of the formation of the General Assembly. This anniversary will occur in the year 1888.

II. Presbyterian Church in the United States.—The following is the comparative summary of the statistics of the Presbyterian Church in the United States for 1884 and 1885, as published in connection with the "Journal" of the General Assembly for 1885:

	1884.	1885.
Synods	13	13
Presbyteries	68	69
Candidates	234	247
Licentiates	54	66
Ministers	1,079	1,072
Churches	1,993	2,159
Licensures	36	39
Ordinations	29	33
Installations	99	81
Ministers deceased	23	31
Pastoral dissolutions	74	96
Ministers received	7	6
Ministers dismissed	4	4
Churches organized	67	76
dissolved	19	20
received	2	3
dismissed	..	6
Number of ruling elders	6,454	6,554
Number of deacons	4,352	4,505
Added on examination	7,359	9,951
certificate	4,369	4,934
Total communicants	131,258	135,201
Adults baptized	2,334	2,995
Infants baptized	4,637	4,767
Baptized non-communicants	32,870	31,036
Teachers in Sunday schools	8,830	10,308
Pupils in Sunday schools	81,633	86,847
CONTRIBUTIONS:		
Sustentation	$43,770	$47,457
Evangelistic	41,307	37,490
Invalid fund	10,402	11,323
Foreign missions	55.553	60,482
Education	37,344	38,485
Publication	8,426	8,372
Tuscaloosa Institute	3,573	3,070
Presbyterial	13,006	13,258
Pastors' salaries	557,731	563,526
Congregational	562,102	510,008
Miscellaneous	65,415	54,202
Total	$1,398,629	$1,347,763

As reported to the General Assembly in May, the total receipts for the year of the Committee of Home Missions were $57,599. The committee had aided in the support of 185 ministers who were serving not less than 500 churches, and in the erection of 18 church-buildings; had supported 67 evangelists, and had aided 24 superannuated or invalid ministers, 79 widows, and the children of 5 deceased ministers.

The Committee of Education had received $17,850, and had aided 160 candidates for the ministry. The sum of $5,572 had been received in aid of the training of ministers at Tuscaloosa, Ala., where 28 colored students had been assisted.

The Committee of Publication returned an excess of assets over liabilities of $47,481. The income of the Publishing House had met all expenses. The whole amount of sales of books had been $21,184, and the amount of gifts of books, etc., $2,935.

The invested funds of the two theological seminaries—Union Seminary, Virginia, and Columbia Seminary, South Carolina—amounted to $464,295, and brought income sufficient to afford a moderate support to the four professors in either institution.

The total receipts of the Committee of Foreign Missions had been $74,516, of which $1.968 had been contributed by the native churches. The committee returned in its missions—in the Indian Territory, Mexico, Brazil, Italy, Greece, and China—7 stations, 75 out-stations, 57 missionaries, 32 of whom are women, 48 native helpers, 1,402 communicants, 526 pupils in Sunday schools, and 678 in day schools. Another station was soon to be opened in Japan.

The General Assembly of the Presbyterian Church in the United States met in Houston, Texas, May 21. The Rev. Dr. H. Raymond, of Marion, Ala., was chosen moderator. It was agreed to celebrate in 1886, when the Assembly will meet in Augusta, Ga., where the organization took place, the quarter-centennial anniversary of the separation and organization of this Church. The Rev. B. M. Palmer, D. D., moderator, the Rev. J. N. Waddell, D. D., stated clerk, and the Rev. J. R. Wilson, D. D., permanent clerk of the General Assembly of 1861, being still living, were invited to deliver suitable commemorative addresses. Concerning the question of striking out from the Confession of Faith the clause averse to marriage with a deceased wife's sister, which had been referred to the presbyteries, the majority of the presbyteries which had reported their answers had replied in favor of striking out; but as not all the presbyteries had responded, the decision in the case was postponed to another year. The Executive Committee of Home Missions was empowered to secure suitable white ministers to work as evangelists among the colored people, and to aid the colored people to organize a Presbyterian Church among themselves. The committee was also authorized to make loans, payable in five years, without interest, to weak churches to aid them in building houses of worship. Foreign evangelists were given power to ordain native pastors or evangelists, under certain restrictions, until such time as native presbyteries may be formed. The presbyteries were asked for advice respecting making provision to enable ruling elders to act as moderators of church courts. A resolution was adopted condemning the growing desecration of the Sabbath, and having special reference to the opening of the New Orleans Exhibition on Sunday.

III. United Presbyterian Church in North America.—This Church includes, according to the statistical reports made to the General Assembly of 1885, 519 pastors and stated supplies, 868 congregations, and 88,871 members. The contributions of the year for all objects amounted to $955,248, of which $71,666 were for foreign missions. The average salary of pastors was returned at $925.

The twenty-seventh General Assembly of the United Presbyterian Church in North America met at Topeka, Kansas, May 27. The Rev. William Johnson, D. D., of College Springs, Iowa, was chosen moderator. The Commission of the Quarter-Centennial Memorial reported that 514 out of 1,839 churches had responded to its circular, and that the sum of $765,444 had been subscribed to the fund. A report of a committee to whom the subject had been referred, disapproving all connection of members of the Church with the Grand Army of the Republic, was laid upon the table. The subject of the use of instrumental music in worship again received attention, the party in the Church who are opposed to it still seeking a reversal of the action of a former Assembly relaxing the prohibition which formerly existed against it. The report of the committee to which the subject was referred, recommending that the matter be left to the several congregations, and opposing a prohibition of the use of instruments, was adopted by a very large majority. An adverse report was made on the subject of the organization of a Woman's Missionary Board. The action of the Board of Education in refusing to aid students who use tobacco was approved. Further action was taken toward union with the Associate Reformed Synod of the South.

IV. Reformed Presbyterian Church: Synod.—The following is a summary of the statistics of the Synod of the Reformed Presbyterian Church: Number of presbyteries, 11; of ministers, 111; of congregations, 121; of elders, 508; of deacons, 316; of communicants, 10,745; of attendants on Sunday schools, 10,290; of baptisms during the year, 480. Amount of contributions: For foreign missions, $11,439; for home missions, $2,142; for the Southern mission, $3,489; for the Chinese mission, $1,626; for the Theological Seminary, $4,109; for education, $3,431; for sustentation, $2,356; for church erection, $20,736; for pastors' salaries, $80,473; for "National Reform" (insertion of an explicit recognition of God and the Lord Jesus Christ into the Constitution of the United States), $4,840; miscellaneous contributions, $54,342; total, $188,983.

The Freedmen's School, at Selma, Ala., returned 7 teachers and an enrollment of 456 pupils.

The foreign mission at Latakieh, Syria, returned 7 missionaries, 31 native teachers and 9 other agents, 143 communicants, 11 baptisms during the year, and 20 schools, with 619 pupils.

The Synod met at Morning Sun, Iowa, May 27. The Rev. D. McKee, of Kansas, was chosen moderator.

V. Reformed Presbyterian Church: General Synod.—The presbyterial statistics of this body are incomplete. The number of communicants under the care of the Synod, six presbyteries, is estimated at about 6,800. The pupils in the Sunday schools are in the proportion of about three to five. The salaries of pastors range from $700 to $2,500.

The endowment fund of the Theological Seminary amounts to $34,737; its receipts for the year were returned at $2,866. The income of the Church extension fund was $2,745.

The contributions of the Church for foreign missions were returned as $4,118. The mission is at Roorkee and vicinity, in the Northwest Provinces of India, and employs 1 missionary with 1 assistant, 5 catechists, and 3 licentiates.

The Synods of both bodies of the Reformed Presbyterian Church considered the report of a committee on a conference of the psalm-singing churches, which was held in Pittsburg, Pa., Sept. 25, 1884, at which the Associate Reformed Synod of the South, the United Presbyterian Church, and the Reformed Presbyterian Synods were represented. At this conference, the duty of maintaining the Westminster Confession and adherence to exclusive psalm-singing were insisted upon. While organic union did not at present appear practicable to it, the representatives of the various churches were recommended to lay before their own bodies the question of co-operation, for them to devise what, if any, plan can be inaugurated for that end. The Conference, by resolution, recommended to the respective churches represented in it, "that their representation and co-operation in the future meetings of the Presbyterian Alliance be conditioned on the exclusive use of the divinely inspired and authorized hymnology contained in the Book of Psalms." The report, and the action of the Conference, were approved by both Synods.

VI. Cumberland Presbyterian Church.—The fifty-fifth General Assembly of the Cumberland Presbyterian Church met in Bentonville, Ark., May 21. The Rev. G. T. Stainbock, D. D., of Tennessee, was chosen moderator. A committee was appointed on the subject of organic union with the Methodist Protestant Church, which had appointed a like committee. The report of the delegates to the meeting of the Council of the Presbyterian Alliance in Belfast, Ireland, was received with approval, and a correct record was made of the action of the Alliance in admitting the Cumberland Presbyterian Church. The resolution adopted on this subject declares that "this new evidence of a growing catholicity among the members of the great Presbyterian family is hailed with pleasure by this General Assembly representing the Cumberland Presbyterian Church," and that they, "as a denomination of Christians, continue to fraternize cordially with the liberal and progressive churches composing the Alliance, endeavoring, in the true spirit of unity with them, to promote the gospel's advancement throughout the world." The subject of constituting a Bureau of Information to aid vacant congregations in securing supplies was referred to the next General Assembly. A delegate was received from the Cumberland Presbyterian Church, colored, with which the Assembly expressed its sympathy. The Assembly already has a standing committee to assist this body in securing money for its theological school in Bowling Green, Ky.

VII. Presbyterian Church in Canada.—The General Assembly of the Presbyterian Church in Canada met in Montreal, June 10; Principal Alexander McKnight, D. D., of the Presbyterian College, Halifax, was chosen moderator. In his address the moderator remarked that, although it was only ten years since the four Presbyterian churches in Canada had been united, they were now at heart thoroughly one. The most important subject of discussion was that of the consolidation of the colleges, on which the report of the committee adduced reasons for desiring consolidation, but questioned its practicability. Action on the subject was deferred for another year. The report on French evangelization showed that nearly a hundred French Protestant congregations had been formed within fifty years, and the number of congregations in Montreal had increased from one, in 1874, to eight, to which nearly four hundred families were attached. The number of communicants exceeded a thousand. Nearly as many communicants had been received during the past year as the entire number on the roll of these churches in 1875. The "Scott Act," in reference to the sale of intoxicating liquors, was approved. The question respecting marriage with a deceased wife's sister was discussed and deferred to another year. A committee was appointed for the unification of the Eastern and Western branches of the Church, which now work, in the administration of their benevolent funds, through distinct boards.

VIII. Church of Scotland.—The number of members in communion with the Established Church of Scotland was reported to the General Assembly in May as 555,622, showing an increase of 11,653 over the number reported for 1883. The number admitted to the Church by baptism was 39,611, or 2,010 more than in 1883. Reports were received from 2,003 Sunday schools, having 18,690 teachers and 200,056 pupils, with 40,711 in attendance in advanced classes, making in all 240,767 persons receiving instruction.

The General Assembly of the Church of Scotland met in Edinburgh on May 21. The Rev. Prof. Mitchell, of St. Andrews, was chosen moderator. The report of the Committee on Christian Life and Work stated that, estimating the population of the 751 parishes from which it had received returns at 1,547,963, the number of adults not in connection with any Christian church was 93,624, or 6 per cent. The income of the Committee for the Conversion of the Jews had been £4,173, and the expenditure £5,430. The ten schools under the charge of the Committee, chiefly in eastern Europe and the Turkish Empire, had been attended by 1,938 pupils, 981 of whom were Jews. Evidences were observed in Poland, Germany, and Russia, of a movement among the Jews in favor of Christianity. The committee stated that one or perhaps two of its schools would have to be given up unless its funds could be increased. The Assembly directed the committee to arrange for deputations to visit all parts of the Church in the endeavor to awaken greater interest in its work. The Committee on Education returned the income of its various funds at £23,778, and the expenditure at £25,087. The Committee on Home Missions reported that its receipts for the year had been £8,645; that it had aided 60 mission stations, having 1,930 communicants, with £1,520; 74 mission churches, having 10,246 communicants, with £3,265; and had provided for the addition of 21 places of worship with 7,213 sittings. The Committee on Christian Liberality reported that the total contributions of the Church, including payments for seat-rents, amounted to £498,863. The Foreign Mission Committee reported that its receipts for 1884 had been: from collections and contributions, £10,154; from legacies, £817; special for the proposed Universities Mission to the Aborigines, £1,366; in all, £12,337, besides the contributions from abroad, which were £912 less than in 1883. Good progress was reported in the Darjeeling mission, India, and in China through the dispensary work; but in East Africa the year "must be marked as perhaps the most agitated and troubled through which the mission has passed." Reports were also made concerning the Continental chaplaincies, by the Colonial Committee, of the condition of churches in British colonies beyond Europe, and by the Committee on the Highlands and Islands, all having to deal with missionary work in some form. The Assembly was informed that a majority of the presbyteries had approved of the change in the act for the admission of ministers from other churches proposed by the previous General Assembly. The law of the Church therefore now requires that applicants asking to be thus received shall satisfy the standing committee that they have passed through a course of literature, philosophy, and divinity, equal in extent to that prescribed for licentiates—the change consisting in the substitution of "and" for "or." Another overture was ordered sent down, providing for the appointment to parishes of ordained ministers from other Presbyterian churches under similar conditions to those which are imposed for the appointment of ordained ministers of this Church not holding a parochial charge. The Assembly repeated its previous declarations on the subject of intemperance, and urged ministers frequently to warn their parishes against its evils, "especially at those seasons when special temptations exist," and to preach on the subject on Sunday, the 20th of December, with special prayer, "in view of the social customs of the New-Year season." A committee was appointed to consider what measures could be adopted to promote the spiritual interests of the great number of the population who neglect all religious ordinances.

IX. Free Church of Scotland.—The General Assembly of the Free Church of Scotland met in Edinburgh, May 21. The Rev. Dr. David Brown, Principal of the Free Church College, Aberdeen, was chosen moderator. The Finance Committee reported that the whole sum raised during the year for the various objects of the Church was £626,028. The number of members was upward of 324,000, showing an increase of more than 2,000. The Sunday schools returned 18,109 teachers and 205,392 pupils. The Home Mission Committee returned as aided by it, 30 ordinary stations, in which there had been a gain of 263 communicants, 2 territorial mission-stations; 34 church-extension charges, with an aggregate membership of 4,443; 19 territorial church-extension charges, with 7.859 communicants, and 86 congregational missions. The amount of the sustentation fund was returned at £171,358; it provided to the ministers who were entitled to enjoy its benefits a "common allowance" of £160, with a "higher surplus" of £17. The amount of the widows' and orphans' fund was £300,451. The Continental Committee returned as under its care during the year, 9 "sanctioned charges" in Italy, Switzerland, France, and Portugal; and 11 stations, 2 of which, at Geneva and Vienna, were new. The Committee of Missions to the Jews made report of operations at 6 stations, in Amsterdam, Breslau, Constantinople, Prague, Pesth, and Palestine (Tiberias). The total revenue of the Foreign Mission Committee for the year had been £64,643. Adding to this the sums contributed for the Continental and colonial work and for the missions to the Jews, the entire missionary income of the Church was £107,245. The Foreign Mission Committee reported concerning the missions in India, Africa, the New Hebrides, and Syria, that 489 adult converts had been added to the Church, and 475 children baptized during the year. Fifty-three ordained missionaries (including 14 natives), 8 medical missionaries (4 natives), 39 missionary catechists, 129 native catechists, and other laborers, to the total number of 544 Christian agents, had been employed. The 6 colleges and 250 schools were attended by 16,233 pupils and students. On the question of disestablishment, the Assembly declared that, adhering to the declarations of recent assemblies, it affirmed "that disestablishment and disendowment in Scotland are not only demanded by the principles of the protest of 1843, but they are urgently called for in the interests of justice and of the peace and welfare of the country; also that, if carried out in a fair and considerate manner, the change will inflict no injury on any religious interest, and is fitted to open the prospect of a far happier ecclesiastical condition in Scotland. Further, inasmuch as the decision of this question lies with those who are intrusted with political power and responsibility, the Assembly leave the question, with all confidence, in the hands of their people. The Assembly remit to the committee to prepare a statement of the position of the Church on this question, as set forth in the findings of the General Assembly, and to circulate the same as they may see fit." The Assembly was overtured to recall the declaration of the previous year on the subject of instrumental music in worship, and to adhere to what had been the "Scriptural practice of the Church for three hundred years"; but it decided that it saw no cause to reopen the question. The review of the progress of the temperance reform within the Church showed that more than 550 of the ministers, seven eighths of the divinity students, and a large proportion of the Christian workers, were abstainers. The Assembly resolved to petition Parliament in favor of the clause in the new police bill making more efficient the penalties against Sunday trading; also in favor of setting apart a certain Sunday in the year for ministers to preach sermons of warning against Sabbath desecration.

X. United Presbyterian Church in Scotland.—The statistical reports of this body give the number of members of the Church as 179,891, and show an increase of 1,696 over the number returned in 1884.

The General Synod of the United Presbyterian Church in Scotland met in Edinburgh, May 4. The Rev. Dr. J. L. Aikman, of Glasgow, was chosen moderator.

XI. Presbyterian Church in Ireland.—This body includes nearly half the Protestant population of Ireland, and consists of 553 congregations, with 620 ministers, 2,075 elders, 7,196 deacons, and 101,452 communicants. For the oversight of these, it has 37 presbyteries, which are formed into five synods, and a supreme body of control, the General Assembly. The number of Sunday-school pupils is 95,469.

The General Assembly of the Presbyterian Church in Ireland met in Belfast, June 1. The Rev. James Whigham, of Ballinasloe, was elected moderator. A large number of memorials were presented concerning the use of instrumental music in worship, forty-eight out of eighty-two of them being in favor of excluding instruments. It was ascertained that, under the action of the Assembly in 1883 and 1884, a number of organs or harmoniums had been introduced into the churches, but that it was customary to stop them five minutes before the beginning of the regular service. A motion to rescind the action of the two previous Assemblies permitting a qualified use of instruments and to enforce the prohibition against it, led to so much excitement in the discussion as to provoke the temporary withdrawal of the members of the Assembly who supported the resolution. The seceders were induced to return, and it was agreed to let the motion remain till the next year's Assembly.

XII. Presbyterian Church in England.—The Tenth Synod of the Presbyterian Church of England met in London in May. The Rev. Robert Taylor was chosen moderator. A statement regarding the growth of the Church showed that while in 1859 the total amount of the congregational contributions was £80,000, in 1883 it reached £193,358. More than half of this sum had been given by congregations that did not exist in 1859.

XIII. Welsh Calvinistic Methodists.—The following is a summary of the statistical reports of this body: Number of ministers, 612, of whom 354 are pastors of particular churches; of elders, 4,483; of chapels and mission-rooms, 1,383; of communicants, 128,374, showing an increase of 3,869 from the previous year, and of 8,415 in ten years; of adherents, 277,290; of members of the Sunday schools, 185,392; total amount of contributions for the year, £174,000, which included £74,000 in support of the ministry, £24,000 in pew-rents, £36,000 to pay chapel debts, £7,400 for home and foreign missions, and £950 in aid of English churches. Twenty-one new chapels had been opened during the year. The number of ministers' residences in the connection was 57. The number of English churches was 178, or nine more than in the previous year, and they returned 9,598 members, showing an increase of 945 from the previous year, or at the rate of 10 per cent., while the rate of increase in the Welsh churches was only 3 per cent. The number of congregations in which the services have been changed from Welsh to English is represented to be steadily increasing.

XIV. Presbyterian Church in New Zealand.—The Presbyterian Church in New Zealand is organized into eight presbyteries, and these return 101 churches, 99 preaching-places, with a total average attendance of 16,237 persons, 74 ministers in charge, 224 elders, 821 managers, 6,298 communicants, and 127 Sunday schools. The collections of the year were: for the benevolent objects of the Church, $4,340; for congregational objects, $112,570; for acquiring and improving church property and paying church debts, $36,085; for miscellaneous objects, $8,125; collections in Sunday schools, for missionary and other purposes, $3,545.

PRESIDENT'S MESSAGE. See page 197.

PRIME, SAMUEL IRENÆUS, an American journalist, born in Ballston, N. Y., Nov. 4, 1812; died in Manchester, Vt., July 18, 1885. In his infancy his parents removed to Cambridge, N. Y., where he spent his boyhood, his father being pastor of the Presbyterian Church known as "The Old White Meeting-House." He began the study of Latin at eight, of Greek at nine, of Hebrew at ten; and in two years was fitted to pass the entrance examination into college. He was graduated at Williams College in 1829, taught school for a while, studied theology at Princeton, and in 1833 was licensed to preach. His first sermon was delivered in Bedford, N. Y., where, just fifty years afterward, he celebrated the semi-centennial anniversary of that event. In 1834 he was called to the church in Ballston Spa, N. Y. Not being very rugged, and more zealous than prudent in his work, Mr. Prime broke down and had to give up preaching for a while. He spent some time in teaching in Newburg, N. Y., but in 1837 he became pastor of the Presbyterian Church in Matteawan, N. Y., where he remained for three years, and where he was married. But repeated attacks of illness made it evident that he was not equal to the strain upon his energies in public speaking. Early in 1840 he was seized with an unusually severe attack, and with much reluctance he resigned his charge. He applied for work on the "New York Observer," and, as his skill in the use of the pen was already known, his application met with a favorable response. The paper was at the time under the charge of J. E. and R. C. Morse and A. P. Cummings. The activity and ability of Mr. Prime were so speedily manifest that he became associate editor of the "Observer" in 1840, and the Messrs. Morse practically relinquished their duties to him. His health was still delicate, yet his labors were abundant and unceasing. He did not confine himself to the columns of the "Observer"; his pen was employed in writing religious books, in advocating educational and benevolent enterprises in the secular press, and also in general literary work. Ten or twelve years of incessant toil produced its natural results. In 1853, an almost helpless invalid, he sailed for Europe for rest and recuperation. His brother, Dr. E. G. Prime, occupied his place during his absence, and the sea-voyage, with change of scene and respite from work, produced the desired result. After a year's absence, he returned with renewed vigor. Taking warning by experience, he resolved to diminish somewhat his toil, and was able to persuade his brother to remain and continue his helper. This gave him opportunity to devote more time to the series known as the "Irenæus Letters," which had become already an attractive feature of the "Observer's" columns, and also to engage in other congenial work. In 1858 Dr. Prime purchased the interest of S. E. Morse in the "Observer," and from that time till his death was its senior editor. Besides the journey abroad in 1853, he made an extensive European tour in 1866–'67, and again in 1876–'77. His letters during these various journeys were frequent and full. In addition to his regular weekly contributions to the paper, Dr. Prime published about forty volumes, among which are "Travels in Europe and the East," "The Alhambra and the Kremlin," "Thoughts on the Death of Little Children," "Life of S. F. B. Morse," and "The Power of Prayer." This last, which was a sketch of the Fulton-Street prayer-meeting, was published in 1859, has been translated into several languages, was reprinted in Europe, Asia, and Africa, and attained, it is said, a circulation of more than 175,000 copies. Dr. Prime was frequently a commissioner to the General Assembly of the Presbyterian Church, and in 1883 went as a delegate from the Northern body to the Southern General Assembly. He was Corresponding Secretary of the American Bible Society, and one of its active directors; Vice-President of the American Tract Society; Corresponding Secretary of the American Evangelical Alliance; President of the New York Association for the Advancement of Science and Art; Trustee of Wells College for Women; Trustee of Williams College; and a member of numerous other religious, benevolent, and literary organizations. He was of a genial, happy temperament, always gentle and courteous, and a welcome guest at every gathering of good and learned men. He had been a resident of New York city for many years.

PRINCE EDWARD ISLAND. Government.—Lieutenant-Governor, Andrew Archibald Macdonald. Executive Council: Premier and Attorney-General, W. W. Sullivan; Provincial Secretary, Treasurer, and Commissioner of Public Lands, Donald Ferguson; Commissioner of Public Works, William Campbell; without portfolio, Neil McLeod, Samuel Prowse, J. O. Arsenault, John Lefarges, Stewart Burns, and A. J. Macdonald.

Communications.—The greatest drawback to Prince Edward Island is the fact that it is an island, and the greatest grievance of the province is the failure of the Dominion Government to carry out one of the conditions upon which Prince Edward Island entered the Canadian Confederation, viz., to provide continuous communication, summer and winter, with New Brunswick. The crossing of Northumberland Strait in winter is an unpleasant and frequently perilous undertaking. Public attention throughout the Dominion was called to the subject in January by the sufferings and danger incurred by Dr. McIntyre, member of the House of Commons, and a large party, who crossed the strait in an ice-boat. In the Provincial Legislature, on the motion of the Premier, an address to her Majesty was unanimously carried, representing the failure of the Dominion Government to fulfill its contract, and praying the Imperial Government to compel Canada to carry out its agreement and to compensate Prince Edward Island for non-fulfillment hitherto. On the outbreak of the Northwest rebellion, in order not to embarrass the Canadian Government while it was engaged in war, both houses of the Legislature passed an address to the Lieutenant-Governor, requesting that the address to the Queen be not forwarded until such time as his Honor's advisers might deem opportune. The address was delivered to the Governor-General in July.

Senator Howlan laid before the Senate an elaborate scheme for establishing communication between Cape Tormentine and Cape Traverse, by means of a subway under Northumberland Strait. The Government would not commit itself to anything further than a promise to give the scheme a careful consideration; but a company applied for a charter to carry out the undertaking. The strait at the narrowest point is eight and a half miles wide, and the greatest depth of water is about ninety feet. A tunnel is deemed to be impracticable, and a bridge would stop navigation. The Dominion Government has constructed a branch railway from the Prince Edward Island Railway to Cape Traverse, and has approved of a plan for building a pier at Cape Traverse 2,100 feet long. On the New Brunswick side the Government also intends to build a pier 2,100 feet long. Senator Howlan proposes to extend both these piers; the one from Cape Traverse 2,000 feet, the one from Cape Tormentine 8,000 feet. The ends of both these piers would be in about 30 feet of water, and they would be connected with each other by a subway about 5 miles long. The subway would be an iron tube three eighths of an inch thick, lined with 2½ feet of concrete, 15 feet in diameter, and constructed in lengths of 300 feet. The tubes would be made on shore, fitted with temporary ends, and floated to the required position. The principal reliance for strength is not placed upon the iron casing, but upon the concrete lining. A pumping and ventilating shaft would be sunk about a mile and a half from the New Brunswick abutment. The estimated cost is $2,080,000.

PROTESTANT EPISCOPAL CHURCH IN THE UNITED STATES. This Church is in communion with the Church of England and its branches throughout the British Empire. It derives its origin from the Anglican Church, and has now entered upon the second century of its existence. The following is a general statistical summary for 1885:

Dioceses	49
Missionary districts	16
Bishops	70
Priests and deacons	3,717
Whole number of clergy	3,787
Parishes (estimated)	8,450
Ordinations, deacons and priests	250
Candidates for orders	272
Churches consecrated	80
Baptisms, infants	38.430
" adults	7,517
" total (including those not specified)	50,723
Confirmations	29,726
Communicants	398,098
Sunday-school teachers	35,637
Sunday-school pupils	323,852
Contributions	$8,717,281 11

Missions.—The Domestic and Foreign Missionary Society of the Protestant Episcopal Church consists of all persons who are members of this Church. It is represented in the Board of Missions, which meets triennially, and is composed of both houses of the General Convention and of the Board of Managers. The Board of Managers consists of all the bishops, the Treasurer of the Board, and fifteen clergymen and fifteen laymen, appointed triennially. The managers are charged with all the powers of the board during the intervals between the triennial meetings. By act of the board, in March, 1875, the by-laws were so amended that the Domestic and Foreign Committees ceased to exist at the close of the fiscal year (Sept. 1). Henceforth the board meets monthly, and "acts in the first instance on all questions which require its attention." It has now a General Secretary and an Associate Secretary, with headquarters in New York city, and its official organ is "The Spirit of Missions," published monthly.

In domestic missions, from Sept. 1, 1884, to Sept. 1, 1885, the missionaries (14 missionary jurisdictions and 30 dioceses) were: Bishops, 13; other clergymen (white, colored, Indian), 412; teachers, catechists, other helpers, etc., 61; total, 486. The financial record stood thus:

Collections, legacies, etc	$268,288 28
Expenditures (fourteen missionary jurisdictions and thirty-one dioceses)	$154,272 34
Missions among Indians	49,773 81
Missions among colored people	20,876 48
Office and other expenses	18,294 00
Cash in bank	25,071 65
Total	$268,288 28

In foreign missions, from Sept. 1, 1884, to Sept. 1, 1885, the numbers were: missionary bishops, 3; other clergy (white and native), 43; teachers, catechists, and other helpers, etc., 173; total, 216. The financial condition was as follows:

Collections, general fund, legacies, etc	$179,310 78
Specials, etc	19,017 16
Total	$198,327 94

The Episcopal Church in Hayti is independent. It grew out of a mission established there in 1864. Ten years later it received a bishop of its own, and since then it has had control of its own affairs. But it receives assistance from the board of Missions (under a special canon), and its connection with the American Church is regulated by a commission of the House of Bishops. Its missionary staff consists of the bishop, 12 clergymen, and 46 lay helpers, a portion of whom receive the funds out of the appropriation of the Board of Managers.

The American Church Missionary Society, which is auxiliary to the Board of Missions, continues its useful work. In the domestic field it has added 35 missionaries, at work in 15 dioceses and missionary jurisdictions.

The Woman's Auxiliary to the Board of Missions, by means of parochial, city, county, and diocesan associations of Christian ladies, raises money, prepares boxes, and in various other ways helps on the missions and missionaries.

The work among Indians and freedmen is producing excellent results, especially in the case of the former. Remarkable success has attended the efforts of these Christian Indians in the direction of self-support, and their readiness to give help on the general missionary work of the Church. Gen. Armstrong, of Hampton Institute, Va., has truly said that "Bishop Hare's work is the very best that is done among the Indians by any religious body in this country." The work among the colored people can not be spoken of in such high terms. There is more difficulty in the way, and less certainty as to the best mode of procedure.

Work among the Jews.—The Church Society for promoting Christianity among the Jews (auxiliary to the Board of Missions) reports encouraging progress. It reaches Jews in about 300 cities and towns, 43 dioceses, and 13 missionary jurisdictions.

Building Fund.—The American Church Building Fund Commission was established by the General Convention in October, 1880. It consists of all the bishops, one clergyman, and one layman from each diocese, and twenty members appointed by the presiding bishop. It aims to raise a fund of $1,000,000 by annual offerings from the several congregations in the Church, and by individual gifts. It renders invaluable service by investigating titles to church property, and adding to its security. It makes loans on favorable terms for church-building wherever it is needed. It has its headquarters in New York.

General Condition.—During the year 1885 two of the bishops died—Bishop Lay, of Easton, Md., and Bishop Young, of Florida—and sixty-three others of the clergy were removed by death during the same time. Three new bishops have been consecrated: William Paret, Bishop of Maryland; George Worthington, Bishop of Nebraska; and Samuel D. Ferguson, Missionary Bishop of Africa. In addition to the statistics given above, there are numerous other societies and organizations existing for carrying forward church-work and fulfilling the mission of the Episcopal Church in these United States; such as the Church Temperance Society, the Free Church Association, the Fund for the Relief of Widows and Orphans of Deceased Clergymen, the twelve sisterhoods and the Order of Deaconesses, the Bible and Prayer-Book Society, and the League in Aid of the Mexican Branch of the Church. This Church has under its control nine colleges in different parts of the country, and sixteen seminaries and divinity schools. There are nine weekly church papers and five monthly magazines, which are devoted to the promulgation and enforcement of Scripture truth as this branch of the Catholic Church holds it in her creeds and standards of faith and practice.

PYTHIAS, KNIGHTS OF. See Knights of Pythias.

Q

QUEBEC, PROVINCE OF. **Government.**—The Lieutenant-Governor is Louis François Roderigue Masson. Executive Council: Commissioner of Agriculture and Premier, J. J. Ross; Provincial Treasurer, J. G. Robertson; Attorney-General, Q. O. Taillon; Provincial Secretary, J. Blanchet; Commissioner of Railways, E. J. Flynn.

Small-pox.—An outbreak of small-pox in Montreal this year carried off upward of 3,000 victims in that city alone, and a much larger number in the suburban municipalities. The disease also extended to scores of villages in the Province of Quebec, but the extent of its ravages in the rural districts can never be even approximately estimated. The history of the epidemic in Montreal tends to strengthen the theory that small-pox is "the most controllable as well as the most contagious of all contagious diseases." The record also furnishes some interesting evidence on the subject of vaccination. Out of 3,164 deaths, only 96 occurred among Protestants, and the average age of the Protestant decedents was much higher than that of the Catholics. This disproportion was very freely ascribed to "the dirty habits of the French Canadians." But nothing could be further from the truth; scrupulous cleanliness is one of the chief characteristics of the French-Canadian homes. The normal death-rate of the city is certainly high, but this is due principally to defective drainage and a general lack of appreciation of sanitary science by the civic authorities. The high birth-rate also necessarily involves a high death-rate. The chief cause of the peculiar susceptibility of the French Canadians to small-pox is unquestionably a prejudice against vaccination. During the past twenty years a vigorous anti-vaccination crusade has been preached in Montreal. The movement was led by a French-Canadian physician in good standing, and has been so successful that 4,911 persons died in Montreal from small-pox in the nine years from 1872 to 1880. Until April, 1885, Montreal enjoyed immunity from the disease, when it was brought to the city by two Pullman-car porters from Chicago. One of these was treated at a private house and isolated. None of the subsequent cases were traced to connection with this one. The other porter was sent to the Hôtel Dieu. All the cases that occurred in the earlier stages of the epidemic were traced to connection with this one. Besides the anti-vaccination prejudice, many French Canadians entertain an equally strong prejudice against isolation. There is a fatalistic spirit among them: if a man is destined to have *la picotte*, he will have it; and it is better to have it when young if one is destined to have it at all. In such a community, the difficulties in the way of enforcing the regulations generally relied upon for the suppression of small-pox are great. Vaccination was offered and declined. The infected houses were placarded, and the placards were torn down, not only by the inhabitants but by strangers, who resented the placarding as an interference with the liberty of the subject. Isolation was ordered, and the sanitary police found mothers visiting the bedsides of small-pox patients with their children in their arms. Healthy infants were brought to sleep with infants suffering from small-pox, so that they might catch the disease and have done with it in infancy. The epidemic found Montreal with an inefficient sanitary department and a civic Board of Health but little disposed to do anything offensive to popular prejudices. The leading merchants, finding that the epidemic was making havoc of Montreal commerce, went to the City Hall in a body and asked that the management of sanitary affairs be transferred to a committee of their nominating. The Council consented to the merchants adding six members to the civic Board of Health. The Provincial Government has the power in times of epidemic to appoint a Central Board of Health for the whole province, with practically unlimited legislative powers. A central board was appointed, and passed most stringent by-laws with reference to isolation, vaccination, etc. All municipalities were required to organize local boards of health, to carry out the orders of the central board. The reorganized local Board of Health of Montreal began a vigorous sanitary campaign, and the exhibition buildings were converted into hospitals. Families that refused to send their small-pox patients to the hospitals were isolated in their own homes, seals being placed on the doors, and every infected house being guarded by a constable. Gratuitous vaccination was offered to everybody, but it was very generally refused by the French Canadians. The principal employers of labor joined a league which required every employé to produce a certificate of vaccination of himself and his family. This organization did more than anything to promote vaccination. The proposition to enforce the compulsory vaccination law led to serious rioting; and it became necessary to call out the militia to restore order. Compulsory vaccination was abandoned for the time, but toward the close of the year several persons were fined for refusing vaccination, and the spirit of resistance to the law seemed to have become much weaker. The remarkable immunity from the disease enjoyed by the English-speaking population in the midst of such a deadly epidemic perhaps did more than the fines to reconcile the French Canadians to vaccination. The deaths by months were as follow: April, 6; May, 10; June, 13; July, 46; August, 239; September, 659; October, 1,393; November, 633; December, 165. Toward the end of December the disease had lost its epidemic character in Montreal.

Riel Agitation.—From the beginning of the Northwest rebellion, a great deal of sympathy with the half-breeds was freely expressed in the Province of Quebec. In April the Provincial Legislature discussed resolutions severely censuring the Federal authorities for culpable neglect, which it was alleged had driven the half-breeds to take up arms, and for further neglect in sending the volunteers to the front insufficiently armed and equipped. The trial, sentence, and execution of Riel raised the "national" feeling among the French Canadians to such a degree that for some time a second rebellion seemed imminent. Throughout the province, Sir John Macdonald and the French-Canadian ministers were hanged and burned in effigy. Mobs took possession of the streets of Montreal, but their excitement found a safety-valve in singing revolutionary songs, breaking a few windows in the English quarter, and hanging and burning effigies. A more serious matter for the Government was the defection of the French-Canadian Conservative members of Parliament, who a few days before the execution of Riel sent an ultimatum to the Government, threatening to go into opposition if the capital sentence on the leader of the rebellion were not commuted. The French-Canadian ministers—Messrs. Langevin, Chapleau, and Caron—were called upon to resign, and, refusing, were, with the members of Parliament who refused to sign the ultimatum, stigmatized as "the party of the rope." The Hon. Mr. Chapleau, in a letter explaining the position of the French-Canadian ministers, boldly declared approval of the execution, on the ground of expediency as well as of justice. The public excitement was stimulated by an energetic political campaign. The *Bleu* (French-Canadian Conservative) and *Rouge* (French-Canadian Liberal) parties were merged in the "National" party. The Ontario Liberals, most of whom thought that Riel ought to have been hanged ten years earlier, for the murder of Scott, did not scruple to encourage the National party, with a view to the overthrow of the Macdonald Government. The year closed with a calmer state of public opinion, but with the Government's tenure of office in a critical condition. (See RIEL, LOUIS.)

R

REFORMED CHURCHES. I. Reformed Church in America.—The following is the summary of the statistics of this Church as they were reported to the General Synod in June, 1885: Number of classes, 34; of churches, 525; of ministers, 561; of candidates, 16; of families, 45,654; of communicants, 82,089; received during the year on confession, 4,309; number of baptisms during the year, 4,277 of infants and 883 of adults; number of baptized non-communicants, 28,417; of catechumens, 30,236; of Sunday schools, 732, with 95,931 pupils. Amount of contributions for religious and benevolent purposes, $230,315; for church purposes, $871,388; total, $1,101,703.

The Board of Education reported to the General Synod that its receipts had been $23,138, and that it had under its care 42 students and was aiding six parochial schools, in which were 475 pupils.

The widows' fund amounted to $66,255; annuitants had been paid $4,078.

The receipts of the Board of Domestic Missions for the year were $33,483. It had aided 103 churches, in connection with which were 85 missionaries, 4,458 families, and 6,380 members, together with 110 Sunday schools, having an attendance of 10,500 pupils. Five new churches had been organized, seven had become self-sustaining. and 621 members had been received on confession of faith.

The entire receipts of the Board of Foreign Missions were returned at $88,131, of which $10,480 had been contributed through the Woman's Board. The missions were in China, India, and Japan, and reported 12 stations, 129 out-stations and preaching-places, 20 ordained missionaries, 29 assistant missionaries, 19 native ordained ministers, 187 other assistants, 41 churches, 3,196 communicants, 9 academies with 420 pupils, 93 day schools with 2,331 pupils, and 36 theological students. The contributions of the native churches were $4,476.

The General Synod of the Reformed Church in America met in Syracuse, N. Y., June 3. The Rev. J. Howard Suydam, of Jersey City, N. J., was chosen president. The Committee on Overtures reported that certain constitutional amendments which it had been proposed to make by the insertion of foot-notes to the baptismal form had been rejected in classical action. The principal amendment proposed was to the clause, " Dost thou believe that thou art conceived and born in sin, wholly incapable of any good, and prone to all evil?" for which it was proposed to substitute the phrase in the Canons of Dort, " incapable of saving good and prone to evil." The committee in its report considered as the first and fundamental point to be regarded in the proposed action, the question of the right of the Synod to make the changes desired. The Church in the United States was organized in 1771, under a pledge to "abide fully by the Constitution of the Reformed Church of the Netherlands, as established by the Synod of Dort, in 1618 and 1619." What it was thus agreed to abide by were the various doctrinal standards, the Liturgy, and the rules of church government; and an important difference existed between the first two of these and the last. The doctrinal standards and the Liturgy were the work of all the delegates from England, Holland, Germany, Switzerland, and other countries. "Into the standards they introduced nothing upon which they could not be unanimous. These standards represented, therefore, as they now represent, the bottom unity of evangelical Protestant Christendom, when its doctrines were taken, as these were, direct and fresh from the Bible well; while the Liturgy represented the same when reduced to form. The rules of church government, on the other hand, were the work of the national Church, its '*post acta*,' when the other delegates were gone; rules applicable to its own situation, and changeable to suit circumstances." Whatever contained doctrine, and this involved both standards and Liturgy, could not be altered by majorities, without general consent, so as to bind dissentients; but there was a constitutional and open way for all needed development. This was defined as follows:

> Instead of the proposed "amendments," which have been rejected, let simple marginal references be appended to the page as proposed by the Classis of Paramus; but leaving everything in the way of interpretation and explanation to the standards themselves, and to an honest ministry pledged thereto, where it has been these two hundred years.
>
> So far as present foot-notes are merely of the nature of better translation, let them be transferred to the text, as proposed by the South Classis of Bergen.
>
> Whatever a proper development may seem to demand in tho way of forms additional to the old or other matter, let it be properly adopted and placed separately by itself, as new matter, marking and appropriate to its own ago; and—
>
> Since there has been as yet no correctly prepared edition of the Constitution, and especially its Liturgy, let a suitable committee be appointed to prepare an accurate one as to translation, arrangement, etc., for future publication, as proposed by the Classis of New Brunswick.

These recommendations of the committee were adopted by the Synod.

II. Reformed Church in the United States.—This Church is organized in seven district synods—those of the United States, Ohio, the German Synod of the Northwest, Pittsburg, the Potomac, the German Synod of the East, and the Central Synod—with a General Synod meeting triennially. In the whole Church are returned, by the statistical reports for 1885, 52 classes, 780 ministers, 1,467 congregations, 172,949 members, 106,093 unconfirmed members, with 13,527 baptisms of infants, 1,135 baptisms of adults, and 9,746 persons confirmed during the year; 1,361 Sunday schools, with 114,004 pupils; and 164 students for the ministry. The contributions for the year included $127,284 for benevolent purposes, and $747,724 for congregational purposes.

In 63 mission-stations in the United States, and one at Valparaiso, Chili—in all, 64 stations — were 102 congregations, with 5,323 members and 5,162 pupils in Sunday schools. In these stations were contributed $2,014 for benevolent and $24,935 for congregational purposes. The church at Valparaiso, Chili, returned 25 members and 30 Sunday-school pupils. Three orphan-homes in the United States provide for 145 orphans. The literary institutions include 7 colleges, 2 theological seminaries, a mission-house, and 9 collegiate institutes and academies. A foreign mission is sustained at Tokio, Japan, where the first Reformed congregation was organized May 11, 1884, and is served by a native elder and a native deacon.

REFORMED EPISCOPAL CHURCH. The Tenth General Council of the Reformed Episcopal Church met in Peoria, Ill., May 28. The Treasurer reported that his receipts for the past two years had been $14,187, and his disbursements $14,026. Two parishes had been added to the organization of the Church. The ordination of five presbyters and three deacons was reported, and two clergymen had been received from other denominations. The trustees of the sustentation fund reported the receipt of $9,972. The home-missionary fund had an annual income of $7,000 from endowments and other sources, besides which $4,000 had been subscribed to it for the next two years. A session of the Council was given to a centennial celebration of the adoption of the American Episcopal Prayer-Book of 1785. A Theological Seminary has been established in Philadelphia, with professorships of Hebrew and Old and New Testament Exegesis, and of Systematic Theology and Christian Evidences, and lectureships on Ecclesiastical History and on Pastoral Theology and Liturgies.

RHODE ISLAND. State Government.—The following were the State officers during the year: Governor, Augustus O. Bourn, succeeded by George P. Wetmore, Republicans; Lieutenant-Governor, Oscar J. Rathbun, succeeded by Lucius B. Darling; Secretary of State, Joshua M. Addeman; Treasurer, Samuel Clark; Auditor and Insurance Commissioner, Samuel H. Cross; Railroad Commissioner, Walter R. Stincss; Attorney-General, Samuel P. Colt; Commissioner of Public Schools, T. B. Stockwell; Adjutant-General, Elisha Dyer, Jr. Supreme Court: Chief-Justice, Thomas Durfee; Associate Justices, Pardon E. Tillinghast, Charles Matteson, John H. Stiness, and George M. Carpenter, succeeded by George A. Wilbur.

Legislative Sessions.—The Legislature met in adjourned session at Providence on the 6th of January, and adjourned near the close of April. On Jan. 20, Jonathan Chace, Republican, was chosen United States Senator in the place of William P. Sheffield, who had been appointed by the Governor. Three proposed constitutional amendments were passed in March, which require the approval of another Legislature before submission to the people, viz.: a prohibitory amendment, a female suffrage amendment, and one granting to foreign-born citizens who served in the Union army during the rebellion the right of suffrage on the same terms as native-born citizens. A brief session of the new Legislature was held at Newport, beginning on the 26th of May.

Finances.—The bonds of the State outstanding Dec. 31, 1885, were as follow:

Bonds of July 1, 1863, payable 1893, coupon....	$200,000 00
" " " " registered.	425,000 00
Bonds of Aug. 1, 1864, payable 1894, coupon....	332,000 00
" " " " registered.	410,000 00
Total....................................	$1,367,000 00

The sinking fund stood as follows:

Sinking fund, Jan. 1, 1885....................	$370,257 07
Received from General Treasurer, Jan. 15, 1885.	100,000 00
Interest received on investments...............	17,736 96
Interest due on investments....................	2,796 00
Amount of sinking fund, Jan. 1, 1886.......	$490,790 03

The balance-sheet was as follows:

Balance in treasury Jan. 1, 1885................	$368,206 41
Receipts for year ending Dec. 31, 1885.........	827,001 41
	$1,195,207 82
Payments for year ending Dec. 31, 1885........	841,707 87
Balance in treasury Jan. 1, 1886................	$353,499 95

The expenditures for the past six years, deducting the amounts paid into the treasury by the courts, and the State institutions at Cranston, from the payments made for their support, have been as follow: 1880, $677,670.55; 1881, $710,619.92; 1882, $675,810.62; 1883, $799,366.94; 1884, $735,269.58; 1885, $768,685.86.

At the outbreak of the civil war in 1861, the State had no debt; at its close there were $4,000,000 of bonds outstanding. Of this amount the national Government reimbursed, for war expenses, $751,391.66, leaving a burden of $3,248,608.34. The State has since paid off $1,881,608.34.

Institutions for Savings.—The returns to the State Auditor of the condition of the savings-banks on Nov. 17, 1885, show:

Increase of deposits	$737,229 76
Increase of surplus profits.......................	237,737 02
Deposits and surplus......	54,376,471 91
The whole number of depositors..............	116,381
Increase of depositors.........................	629
Increase of those depositing less than $500	443
Average to each depositor......................	$445 24
Amount loaned on mortgages of real estate in other States..............................	$3,430,925 38

The above does not include the amount of deposits on participation, $4,016,275.55, or the number of depositors, 1,358, in the Rhode Island Hospital Trust Company.

Education.—The following are some of the statistics of the school returns for the year:

Number of children from five to fifteen years inclusive	60.147
Increase from last year..............................	1,289
Number who have attended school more than twelve weeks..	46,570
Increase from last year..............................	2,672
Number who have not attended any school.........	11,222
Decrease from last year	1,672
Number of day schools..............................	882
Average length......................	nine months six days.
Different pupils enrolled............................	47,990
Number of teachers regularly employed............	1,007
Amount paid teachers	$453,687 25
Pupils enrolled in evening schools	4,714
Average attendance.................................	2,371

The largest part of the gain has been made during the past two years, or since the enactment of the new truant and absentee law.

The State aid granted to the free public libraries has proved of great advantage to them, and in ten years they have increased in number from seven to thirty-three.

The Normal School was organized in 1871. There have been connected with it 1,014 pupils. Three hundred and fifty-four have been graduated, and almost all of these have taught in the State.

The School for the Deaf is small, but well conducted.

The State Home and School for Dependent and Neglected Children was opened for the reception of inmates the first week in April, 1885. Since that time twenty-six children have been at the school, as many as could be accommodated in the buildings then on the place. During the summer and autumn a second wooden cottage was built, capable of holding twenty-five more children, which is now filled. A large stone wing has been added to the main building.

The Rhode Island School of Design has been strengthened in its corps of teachers, and has done excellent work during the year. This school is the nearest approach the State has to an industrial school.

Relief of Soldiers and Sailors.—An act of 1885 created a commission for the relief of disabled and needy soldiers and sailors, appropriating $5,000. There are residing in the State: soldiers and sailors, 5,703; widows of soldiers and sailors, 766; children of soldiers and sailors under sixteen years, 7,681; number receiving United States pensions, 846.

The commissioners recommend to the General Assembly that the sum of $10,000 be appropriated to carry out the provisions of this act for 1886, and state that this amount is by no means too large to meet the anticipated needs, judging from the number of worthy cases already assisted.

Charities and Corrections.—For 1885, the sum of $140,000 was appropriated for the Board of State Charities and Corrections in addition to their receipts. These receipts, derived from labor and board of inmates, sales of produce, etc., amounted during the year to $40,630.74. This money, added to the appropriation, increased their resources to $180,630.74. From this sum was drawn a total of $171,327.26, leaving a balance of $9,303.48.

The new buildings for the insane, begun in 1884, have been finished and occupied. Their total cost was $60,000, and they will accommodate about eighty inmates.

The number of inmates in the several institutions, December 31, 1885, was as follows: State Prison, 124; Providence County Jail, 204; Sockanosset School for Boys, 166; Oaklawn School for Girls, 27; Workhouse and House of Correction, 226; State Almshouse, 193; Asylum for the Incurable Insane, 370. Total, 1,310.

Shell Fisheries.—The rentals received by the State from oyster-beds were $10,757 in 1883, $11,581 in 1884, and $10,433, with rents rebated and uncollected of $325, in 1885. The falling off of receipts for the year was due to the cancellation of leases, and there will be a reduction again for 1886 in income on account of the continued abandonment of leased ground. The surrender of leases for 1885 is attributed chiefly to the fact that the planting of Virginia oysters is unprofitable, the cost of stock having advanced.

The scallop-catch proved less than half the usual one. The scallop "set" during the summer was very large, and the seed very generally distributed over the scallop-ground.

State Boundary.—On April 22, 1885, three commissioners were appointed to act in conjunction with commissioners appointed by Connecticut to agree upon the boundary-line between the two States "in the waters of the sea." The commissioners agreed upon a theory for establishing the State line from Pawcatuck river through Little Narragansett Bay to the State line formerly agreed upon between the States of New York and Connecticut. It was found, however, that the boundary-line in Pawcatuck river, from a bolt in a rock near the junction of Ashaway river with the Pawcatuck to the sea, had never been defined, and considerable interests are affected by the question of its location. Doubting their authority over a part of this space, the Rhode Island Commissioners delayed final action.

Population.—The following table gives the population of the State according to the census of 1885, compared with two preceding censuses:

TOWNS AND DIVISIONS.	YEARS.		
	1875.	1880.	1885.
Barrington	1,185	1,359	1,394
Bristol	5,829	6,028	5,737
Warren	4,005	4,007	4,209
Bristol County	11,019	11,394	11,340
Coventry	4,580	4,519	4,806
East Greenwich	3,120	2,887	2,659
West Greenwich	1,034	1,018	863
Warwick	11,614	12,164	13,286
Kent County	20,348	20,588	21,614
Jamestown	488	459	516
Little Compton	1,156	1,202	1,055
Middletown	1,074	1,139	1,166
New Shoreham	1,147	1,208	1,267
Portsmouth	1,893	1,979	2,008
Tiverton	2,101	2,505	2,702
Towns, Newport County	7,859	8,487	8,714
Newport City	14,028	15,693	19,566
Burrillville	5,249	5,714	5,126
Cranston	5,683	5,940	6,005
Cumberland	5,673	6,445	7,163
East Providence	4.336	5,056	6,816
Foster	1,543	1,552	1,397
Gloucester	2,098	2,250	1,922
Johnston	4,999	5,765	7,274
Lincoln	11,565	13,765	17,229
North Providence	1,308	1,467	1,478
North Smithfield	2,797	3,088	3,077
Pawtucket	18,464	19,030	22,906
Scituate	4,101	3,810	3,606
Smithfield	2,857	3,085	2,338
Woonsocket	13,576	16,050	16,199
Towns, Providence County	84,249	93,017	102,536
Providence City	100,675	104,857	118,070
Charlestown	1,054	1,117	1,042
Exeter	1,355	1,310	1,086
Hopkinton	2,760	2,952	2,796
North Kingstown	3,505	3,949	3,894
South Kingstown	4,240	5,114	5,549
Richmond	1,739	1,949	1,744
Westerly	5,408	6,104	6,333
Washington County	20,061	22,495	22,444
Whole State	258,239	276,531	304,284

The total population in 1850 was 147,545; 1860, 174,620; 1865, 184,965; 1870, 217,353.

Political.—The Republican and Democratic State Conventions were held in Providence on March 19. The Republican nominees were: Governor, George Peabody Wetmore; Lieutenant-Governor, Lucius B. Darling; Secretary of State, Joshua M. Addeman; Attorney-General, Samuel P. Colt; Treasurer, Samuel Clark. The

Democratic nominees were: Governor, Ziba O. Slocum; Lieutenant-Governor, Jonathan M. Wheeler; Secretary of State, Thomas Robinson; Treasurer, John G. Perry; Attorney-General, Frank H. Jackson. The election occurred on April 1, and resulted in the success of the Republican ticket. The vote for Governor was: Republican, 12,563; Democratic, 8,574; Prohibition, 1,206; scattering, 5. The Legislature chosen at the same time is thus constituted: Senate, 28 Republicans and 9 Democrats; House, 53 Republicans and 19 Democrats. On Feb. 5, Nathan F. Dixon (Republican) was elected Representative in Congress from the Second District, to succeed Senator Chace.

RIEL, LOUIS, the leader of the Red river rebellion of 1869 and the Northwest rebellion of 1885, born at St. Boniface (opposite where Winnipeg now stands), in 1847; executed at Regina, Northwest Territory, Nov. 16, 1885. He was the son of Jean Baptiste Riel, a member of the Metis race, or Franco-Indian half-breeds of the Northwest, who in 1849 led a revolt against the authority of the Hudson Bay Company. Louis Riel was a *protégé* of Archbishop Taché, of St. Boniface, and was educated at the Jesuits' College in Montreal. His educational advantages gave him considerable influence over the Metis, and from an early age he posed as the champion of his race. On the transfer of the Northwest Territories to the Dominion of Canada by the Hudson Bay Company in 1869, the half-breeds demanded a portion of the purchase-money, denied the right of the company to make such a bargain, and refused allegiance to the Dominion Government. Practically the half-breeds, who were the descendants of the company's servants and their Indian wives, claimed property and sovereign rights in the lands of the Northwest. Riel, at the head of the half-breeds, opposed the entry of the Hon. William McDougall, the first Lieutenant-Governor appointed to the Territories, and formed a provisional government on Dec. 8, 1869, after his insurgent followers had taken possession of Fort Garry and captured Dr. Schultz and forty-four Canadians. In February, 1870, Archbishop Taché, who had been sent for from Rome, was authorized by the Canadian Premier, Sir John Macdonald, to promise a general amnesty to the rebels. On Feb. 17 Riel captured Maj. Bolton and forty-seven men, and on March 4 he ordered out for instant execution one of his prisoners, Thomas Scott, an Ontario Orangeman. Archbishop Taché arrived at Red river five days later, and promised an amnesty for all offenses, including the murder of Scott. The questions whether the archbishop was justified in making this promise and whether her Majesty's Governments were bound by it were the subjects of hot controversy. Riel evacuated Fort Garry when the Red river expedition under Gen. Wolseley was in sight of the fort. On Lieut.-Governor Archibald's issuing a proclamation calling for volunteers against the Fenians, Riel advised his friends to defend the Government. The Lieutenant-Governor accepted Riel's services, complimented him upon his loyalty, and reviewed his forces. On Jan. 1, 1872, Riel accepted $1,600 from the Canadian Government, through the hands of Archbishop Taché, as an inducement to leave the country, and in February he was conveyed to the frontier under the protection of a police escort. In September, 1872, Riel declined the nomination for the representation of Provencher in the Canadian House of Commons in favor of Sir George Cartier, but in October of the following year he was returned by acclamation, and he was again returned in January, 1874. At this time the Dominion Government was expressing the utmost anxiety to capture Riel, and the feeling against him in Ontario on account of the murder of Scott was most bitter; but at the end of March Riel appeared suddenly and mysteriously in the Clerk's room of the House of Commons, signed the roll of membership, and disappeared as suddenly. On April 16, 1874, the House expelled him by a vote of 124 to 68. In September he was once more elected by Provencher, and in the same month he was outlawed. In February, 1875, he was sentenced to five years' banishment and forfeiture of political rights. In 1877 he was incarcerated for several months in Beaufort Lunatic Asylum, Quebec, under an assumed name; but whether on account of insanity, or for the sake of protection and concealment, is a disputed point. (An account of Riel's connection with the rebellion of 1885 is given in the article on CANADA, page 124.) He was tried at Regina before Hugh Richardson and a jury of six, upon an indictment containing six counts. The

LOUIS RIEL.

first three charged that the prisoner, being a subject of the Queen, made war against her Majesty at Duck Lake, Fish Creek, and Batoche respectively. The other three charged that the prisoner, living at the time within the Dominion of Canada and under the Queen's protection, made war against her Majesty at the same three places. Riel having been convicted and sentenced to death, an appeal was made to the Privy Council in England, attacking the constitutionality of the court. The authority of the court was sustained, and the capital sentence was duly executed on Nov. 16. The refusal of the Dominion Government to recommend the Governor-General to commute Riel's sentence led to a serious political movement in the Province of Quebec. A plea of insanity was set up, and as evidence thereof Riel's incarceration in Beaufort Asylum and his pretended inspiration were principally relied upon. There was in Riel, unquestionably, eccentricity approaching to insanity; but there was no evidence that his mind was so unhinged as to relieve him from responsibility. (See page 707.)

ROMAN CATHOLIC CHURCH. The most important event of the year 1885 was the promulgation of the encyclical, *Immortale Dei*, addressed by Leo XIII to all the patriarchs, primates, archbishops, and bishops of the Catholic world, and dated Nov. 1, 1885. The portion of the encyclical that relates to the duties of citizes to the church and the state had excited, in advance, rumors of some new and startling propositions, which were commented on adversely by some of the secular journals, and served to give the non-Catholic world unusual interest in this pontifical document. The following quotation from the *Immortale Dei* is taken from a translation by James McMaster, editor of the New York "Freeman's Journal." It affirms old principles, in elegant Latin, that no state can exist without a basis of religion, and that there is but one religion from God. The Pope cites the examples of the early Christians, who, in high offices, in the very palaces of the emperors, were willing to yield their places, and even to die, rather than hold honors at the expense of virtue, so that, according to Tertullian, when it became lawful to profess the Christian religion in positions of state, it appeared in a great part of the cities, not as a babe crying in its cradle, but already grown up and of goodly strength.

> And now in these times it is becoming to revive these examples of those of old. Catholics worthy of the name must be most loving children of the Church, and wish to be understood as such; without hesitation to reject whatever can not be reconciled with this honorable note; to use the ways and customs of the people, so far as it can rightly be done, for the fostering of truth and justice; to work it out that liberty of action shall not overleap the line drawn by the law of God and of nature; to be intent that every state may be brought back to that Christian form and likeness of which we have spoken. The way of attaining these ends can not aptly be laid down in any one certain mode, since they must be made to suit the various times and places that greatly differ the one from the other. Lest the union of minds be destroyed by the rashness of blaming, let all understand this: That the integrity of Catholic profession can not possibly coexist with opinions approaching *naturalism* or *rationalism*, the sum of which is to destroy Christian customs from their foundation, and to establish a rule of man in society, from which God is excluded. In like manner it is not lawful to follow one rule in private conduct and another in the government of the state, so, to wit, that the authority of the Church should be observed in private life, but rejected in state matters. But, if it be question of opinions purely political, of the best kind of government, of ruling states on one or other plan, there may indeed be honest disagreement regarding all such things.

Another important episode was the affair of the Caroline Islands, in which the Pope acted as mediator between Germany and Spain. (See CAROLINE ISLANDS.)

The Order of Pius IX was founded expressly by Pius IX, to enable him to confer, in his temporal position, an honor on non-Catholics, and even non-Christians. It is usually given to ambassadors, and has been oftener conferred than the Order of Christ, which, it was supposed, was reserved for Catholics alone. The conferring of the Order of Christ on Prince Bismarck, and the seeming intention of the present Pope to give it more prestige than the Order of Pius IX, was as significant as it was surprising, although the prince had so far departed from his attitude of the Kulturkampf as to make a conciliation between Germany and the Holy See not improbable.

In France, the war of the republic in the interest of secularizing all institutions controlled by the Church still continued. The suppression of the allowances made by the state to various priests excited much discontent and protest, as the pretext for so doing was scarcely tenable; and the money paid to the Church in France is not a state grant, but an indemnity. A spirited correspondence took place between M. Goblet and the Bishops of Pamiers and Viviers on the subject of state interference. The substitution of lay nurses for Sisters of Charity in the hospitals of Paris excited much controversy and many protests. In spite of the letters of the physicians attached to the hospitals, testifying warmly in favor of the Sisters as nurses, the municipal council persevered in its policy of "laicization."

On Nov. 28, a debate took place in the Reichstag on the question of authorizing the establishment of Catholic missions in Africa. The Fathers of the Congregation of the Holy Ghost had asked for permission to found a mission at Cameroon. This was refused, on the ground that the Fathers, who are Germans living in Paris, were similar to the Jesuits, and, as the law had expelled the Jesuits from Germany, the same law applied to all the colonies. Prince Bismarck insisted that the Fathers of the Holy Spirit were either of Alsatian or Lorraine origin; but in the same speech said that the Jesuits had been expelled from Germany, not because they were Catholics, but because they belonged to no country.

The Archbishop of Vienna protested against the exhibition in that city of a picture by the artist Veraschagin, and a solemn mass of reparation was celebrated, at which a large number of people assisted, to atone for the public insult to the Blessed Virgin, done by the painter in representing her as the mother of more than one child. Cardinal Schwarzenberg, born at Vienna in 1809, died. He was Archbishop of Prague and a cardinal priest, created Jan. 24, 1842. The Italian cardinals that died during the year were Chigi, aged eighty-four; Lasagni, at the age of seventy-one; Nina, born in 1812; and Panebianco, born in 1808.

In Canada, the rebellion of Louis Riel was given a religious gloss by the insane ravings found in the papers of Riel, and the statement that the late Mgr. Bourget had called him a providential leader of the Métis, who felt that they had sustained wrongs at the hands of the Canadian authorities. But the voice of the ecclesiastical authorities was on the side of law and order, and against a hopeless struggle, and, after the execution of Riel, did much to calm the violent indignation of the French Canadians.

On Nov. 27 the Pope addressed an important brief to the bishops of England on the question of religious education.

Australia, which had already been honored by a cardinal's hat in July, 1885—bestowed on Most Rev. Dr. Moran, Archbishop of Sydney—was the scene of a plenary council, which fitly closed a year of religious progress in that colony.

On Feb. 11, 1885, the Most Rev. Edward McCabe, Cardinal and Archbishop of Dublin, died. He was succeeded by the Rev. William J. Walsh, D. D., President of Maynooth College. The ceremony of his consecration was performed at Rome by Cardinal Moran on Aug. 2, 1885. Among the deaths of notable Catholics was that of Lady Georgiana Fullerton, sister of Earl Granville, who, by her writings, had done much toward the elevation of Catholic English literature; and that of A. M. Sullivan, author of "New Ireland," in whose death the Catholics of Ireland felt that they had met with a great loss.

In the United States, Archbishop Ryan, who had succeeded Archbishop Wood in the Diocese of Philadelphia, received the *pallium* on Jan. 4, 1885; and on Jan. 25, Archbishop Leray, who had succeeded Archbishop Perché in the Diocese of New Orleans, also received the *pallium* from Rome. On the same day the Rev. Camillus Maes was consecrated Bishop of Covington, Ky. On March 19, Rt. Rev. Antoine Durier, D. D., was consecrated Bishop of Natchitoches by Archbishop Leray. On April 19, Rt. Rev. A. J. Glorieux was consecrated Bishop and Vicar-General of Idaho by Archbishop Gibbons in Baltimore. On Aug. 2, Rt. Rev. Richard Phelan was consecrated Titular Bishop of Cibyra and coadjutor to Rt. Rev. J. Twigg, Bishop of Pittsburg. On Aug. 15 a temporary chapel and memorial cross were dedicated at Auriesville, N. Y., where Father Isaac Jogues and René Goupil were martyred by the Indians in 1642 and 1646. On Sept. 20 the Rt. Rev. Jeremiah O'Sullivan was consecrated Bishop of Mobile, Ala., by Archbishop Gibbons.

The reports of the churches show a large decrease in debt and a large interest in parochial schools. The project for the founding of a Catholic university at Washington has met with much favor, and is energetically pushed forward. The consecration of St. Patrick's and St. Peter's Churches in New York, and St. Patrick's Church in Hartford, Conn., are hopeful signs that church debts will soon be paid off and more consecrations made possible. On Dec. 4, Rt. Rev. Dominic Manucy, Bishop of Maronea and Vicar Apostolic of Brownsville, Texas, died. He was born at St. Augustine, Fla., in 1823. He had been Bishop of Mobile, but had resigned that see. On Sept. 20, Archbishop Riordan, of San Francisco, was invested with the *pallium*.

The Most Eminent and Most Reverend John McCloskey, Archbishop of New York, died at the archiepiscopal residence on Oct. 10. (See McCloskey, John.) He was succeeded by the Most Rev. Dr. Corrigan, Titular Archbishop of Petra, formerly Bishop of Newark, N. J.

There are now in the United States 12 archbishops, 62 bishops, 7,296 priests, 85 colleges, and 492,949 children attending 2,621 parochial schools. It is hardly possible, from the statistics furnished, to estimate exactly the Catholic population of the United States.

The year 1885–'86 is notable for the creation of a new American cardinal, this honor falling on Archbishop Gibbons, of Baltimore.

ROUMANIA, a kingdom of eastern Europe. Absolute independence from Turkey was proclaimed May 22, 1877, and was recognized by the powers at the Congress of Berlin, June 13, 1878. The principality of Roumania was erected into a kingdom March 26, 1881. The Constitution delegates the legislative power to the Senate, of 120 members, and the Chamber of Deputies, of 183 members, chosen by electoral colleges. Every taxed citizen is a voter. The King, Carol I, the son of Prince Hohenzollern-Sigmaringen, was born April 20, 1839. He was elected Prince of Roumania in 1866. The ministry is composed of the following members: President of the Council and Minister of the Interior, and of Foreign Affairs *ad interim*, J. C. Bratiano; Minister of Public Instruction and Worship, D. Sturdza; Minister of Finance, G. Lecca; Minister of Agriculture, Commerce, and Domains, A. Stolojan; Minister of Justice, C. Nacu; Minister of War, Gen. E. Falcoiano.

Area and Population.—The area of Roumania is 48,307 square miles. The population is estimated to be 5,376,000. The number of marriages in 1884 was 40,548; of births, 201,413; of deaths, 123,808; natural increment, 77,605. The population of Bucharest, the capital, is about 221,000.

Commerce.—In 1883 about 38 per cent. of the foreign trade was with Austria, 27 per cent. with Great Britain, 10 per cent. with France, 9 per cent. with Germany, 4 per cent. with Turkey, and 3 per cent. with Russia. The exports to Great Britain exceeded the imports from that country; but the imports from Austria and from France were double in value the Roumanian exports they received, and the trade with Germany consisted almost entirely of imports. The total value of imports was 359,907,178 lei, or francs, against 268,851,921 in 1882; the total value of exports 220,650,279 lei, against 244,730,199.

Communications.—The entries in the Danubian ports in 1884 show a total of 3,711,143, the clearances of 3,678,849 tons.

The length of the state lines of railroad in 1885 was 1,458 kilometres; of private lines, 224; of state lines under construction, 807; and projected, 479 kilometres.

The number of letters carried in 1884 was 15,863,062, including postal-cards, circulars, and official letters; the number of packets, 506,255; of postal orders, 149,286.

The length of telegraph lines in 1884 was 5,210 kilometres; of wires, 10,866; the number of dispatches, domestic and international, including official dispatches, was 1,203,500; the receipts of the postal and telegraph service, 3,981,097 francs; expenditures, 3,753,940.

Finances.—The revenue in 1883–'84 was 146,859,571 francs, the expenditure 135,557,860. The budget for the year ending March 30, 1886, fixes the revenue at 130,038,720 francs, and the expenditure at an equal amount. The yield of the direct taxes is taken as 24,780,000 francs; of the indirect taxes, 55,335,000 francs; of domains, 20,963,108 francs; of railroads, and the mines at Bahna, 11,617,925 francs. The public debt on March 30, 1885, amounted to 683,847,607 francs.

Army and Navy.—The strength of the permanent army is 1,249 officers and 31,627 soldiers, with 31,627 horses and 312 guns. The kingdom is divided into four territorial districts, in each of which an army corps is organized, besides the Dobrudja, which has a division. The strength of the territorial army is 1,213 officers and 124,000 men. The naval force consists of 2 gunboats, a torpedo-vessel, and 2 torpedo-boats on the Danube. Every Roumanian upon reaching the age of twenty-one is enrolled either in the permanent or the territorial army, and serves eight years.

The Political Situation.—The tariff question was uppermost in Roumanian politics in 1885. On May 22 the commercial treaty with Austria-Hungary was finally denounced. The treaty will expire June 1, 1886. The demand of Roumanian manufacturers for protection, and the protective duties on cereals recently imposed in France and Germany, induced the Roumanian ministry to inaugurate an active protective policy. The legislature passed a law levying a surtax of 50 per cent. on imports from France and other countries not protected by special treaties, to go into operation July 1 (see FRANCE). Besides France, the new customs duties affected Turkey, Greece, Sweden, Servia, Denmark, and the United States.

The dispute with Bulgaria on the subject of the frontier line at Arab Tabia was not settled when the revolution in Eastern Roumelia broke out. In common with the other Balkan states, Roumania demanded a readjustment of boundaries as a condition of the union of the two Bulgarias; yet she did not accompany her request for the incorporation of the districts in Bulgaria peopled by Roumanians with a military demonstration.

The emigration of Mohammedans from the Dobrudja was made a basis for Turkish complaints in the early part of the year, although the condition of the Turks and Mussulman Tartars in that district was worse under Turkish than under Roumanian rule. They were exempted from taxation for four years after the annexation, and then taxed more lightly than other Roumanians, having to pay a capitation-tax in lieu of military service. Recently they have been subjected to the conscription law. Another ground of complaint is that the property of Turkish landlords has been confiscated. The Roumanian Government claims that the persons who claim the land were legally agents of the Turkish Government to collect the tithes, who in many instances treated the land as their own, but whose title was never recognized by the Turkish Government. The land was distributed among the farmers on condition that they should pay tithes. The title remained in the Turkish Government and was transferred by the cession to the Roumanian Government.

Treatment of Jews.—The oppression of Jews under the Roumanian alien laws was the subject of an appeal to foreign governments, especially the English, in 1885. Lord Beaconsfield had inserted in the Treaty of Berlin an article that provided that difference in creed should not be a ground for exclusion from public employment, the exercise of professions and industries, or any civil or political rights in Roumania. The Roumanian legislature has evaded this guarantee by passing laws against foreigners. Immediately after Roumanian independence was recognized by the powers, the Jewish natives of Roumania were declared to be aliens, and restrictions were placed in the way of their obtaining naturalization. There are only 59 naturalized Jews in the kingdom. The liberal professions are closed to Jews, and in 1884 a law against hawking by foreigners reduced 20,000 Jewish peddlers to distress. The discussion of Jewish grievances abroad led to the expulsion in November of eight Jewish journalists of Bucharest.

ROUMELIA, EASTERN, an autonomous province of Turkey, created by the Treaty of Berlin, signed July 13, 1878. It remained under the political and military control of the Sultan, but received autonomy in administrative affairs. The organic statute was elaborated by a commission sitting in Philippopolis during the Russian occupation, and became law through an imperial firman, issued May 17, 1879. The local administration was placed in the hands of elected representatives. One fifth of the members of the general councils in the six departments were to be nominated by the Governor-General, and the rest elected by universal suffrage. Equal religious rights and protection, freedom of the press, inviolability of property and of the domicile, and the equality of the Bulgarian, Turkish, and Greek languages were guaranteed. The Governor-General, who must be a Christian, is named by the Sublime Porte, with the assent of the powers, for the period of five years.

On the expiration of the term of Aleko Pasha, the Porte appointed Gavril Pasha Chrestovich Governor-General, and he was installed on July 3, 1884. The legislative power is exercised by a single chamber called the Provincial Assembly. The chief judicial and ecclesiastical dignitaries are members *ex officio*, to the number of ten, and the remaining thirty-six members are elected by the people for four years. The European commission fixed the annual tribute to the Sultan at 240,000 Turkish pounds, which was estimated to be three tenths of the total revenue, the proportion assigned to Turkey in the organic statute. Owing to the ruined state of the country after the war, the emigration of Mohammedans to Turkey, and of Bulgarians to Bulgaria, the net revenue did not exceed 600,000 Turkish pounds. In 1882 the Provincial Assembly passed an act reducing the yearly tribute to 180,000 Turkish pounds. This law was not ratified by the Porte, but was carried out by Aleko Pasha as an administrative regulation in the same way as several other vetoed enactments. Two thirds of the revenue is derived from direct taxes. The budget for 1884–'85 estimated the revenue at 643,650 Turkish pounds, and the expenditure at 681,976.

Area and Population.—The area of Eastern Roumelia is 13,500 square miles. The population was officially computed in 1884 as 850,000. The Mohammedan and Greek-speaking population constituted two fifths of the total at the time of the creation of the autonomous province, but in consequence of emigration the proportion is diminished to one third.

Productions. — The chief occupation of the people is agriculture. The area under cultivation is 1,663,000 acres; the product in 1881 was 2,543,292 hectolitres, or about 7,000,000 bushels, of wheat, 1,365,609 hectolitres of barley, 1,242,533 of rye, 1,170,700 of maize, and 399,779 of oats. The production of ottar of roses in 1881 was 1,422 okes (1 oke = 2·8326 pounds), which is sold in Eastern Roumelia at the average price of $300 an oke. The production of wine was 16,834,680 okes; of tobacco, 547,248; of cocoons, 67,154. Spelt, vetch, millet, anise-seed, and sesamura are also grown. A large number of sheep, goats, cattle, and swine are raised. Woolen cloth and braid are manufactured and exported.

Commerce.—The imports in 1883 amounted to $2,451,000, an increase of $860,000 over those of the previous year. The total value of the exports was $2,752,000, showing an increase of $989,000. The leading articles of exportation are cereals, wood, wine, silk, and hides.

The Revolutionary Movement. — Under Aleko Pasha's administration there were two political parties, each of which had for its aim the union of the province with Bulgaria. The Liberal party was controlled by the Governor-General, and had a large majority in the Assembly. The Conservatives depended on Russian influence to secure political independence and the creation of a Great Bulgaria, while the Liberals distrusted Russia and looked to the Western powers for help. Karaveloff, who was expelled from Bulgaria after the *coup-d'état* of Prince Alexander, became the leader of the Liberal party, and organized a movement for the union of the two Bulgarias under Aleko Pasha. The officers of the militia and the gendarmerie sympathized with the Liberal party and supported Aleko Pasha in his efforts to supplant the authority of the military commanders-in-chief appointed by the Sultan. Aleko's dubious attitude toward Russia rendered futile his efforts to be appointed his own successor. Gavril Pasha Chrestovich, who secured the appointment, was Aleko Pasha's Secretary-General and Director of the Interior. As the friend and *protégé* of Russia and Aleko's rival, he dismissed every Liberal from office. The Liberal politicians, deprived of all influence in public affairs, and many of them of the means of livelihood, determined on striking a blow. The situation in Bulgaria was propitious. Karaveloff was now the Prime Minister of Bulgaria. Several of the Roumelian Liberals were appointed by him to office. While the movement was set on foot in Eastern Roumelia and Bulgaria, Europe was made familiar with the economical and political arguments in favor of the union. The Government in Eastern Roumelia rendered itself more and more unpopular. Some of its measures provoked resistance. More arbitrary means were then resorted to, in order to destroy the power of its opponents. The Governor-General began to remove the Liberal officers in the gendarmerie. Major Ljoubovsky was suddenly dismissed. His comrades expected the same fate, and urged Karaveloff to hasten the movement and achieve the union by means of a military revolution (see BULGARIA). The Russians had laid their plans for a revolution in the spring of 1886. It was to have been preceded by an insurrection in Sofia and the overthrow of Prince Alexander in favor of Prince Peter Karageorgevich. That would be the signal for an attempt to upset King Milan in Servia. When Russian control should be thus re-established in Bulgaria, and a struggle inaugurated for the predominance of Russian over Austrian influence in Servia, it was intended that Macedonia and Old Servia should throw off the Ottoman yoke, and Eastern Roumelia declare her independence and union with Bulgaria. This revolution was being carefully and assiduously prepared by the Slav committees in Bulgaria, Roumelia, Macedonia, and Servia, when the national element in Bulgaria and Roumelia anticipated the movement and utilized the results of the laborious intrigues of the Russian authorities to upset all their plans and more effectually emancipate Bulgaria from Russian domination. Russian diplomacy was compelled either to approve and support the anti-Russian revolution, or to renounce the principle of the Treaty of San Stefano, and run the risk of forfeiting the last spark of Bulgarian gratitude (see TURKEY).

RUSSIA, an empire in eastern Europe. The law-making, executive, and judicial authority is concentrated in the hands of the Emperor, who is also the spiritual head of the Church. The government of the country is under the direction of the Emperor's private Cabinet. The Minister of the Imperial Household is Gen. Count Vorontzoff Dashkoff; the Minister of Foreign Affairs, Nicholas de Giers; the Minister of War, Gen. Vannovski; the Minister of the Interior, Count Tolstoy; the Minister of Public Instruction, M. Delianoff; the Minister of Finance, M. Bunge; the Minister of Domains, M. Ostrovski. The Minister of the Navy, which is under the command of the Admiral-General, the Grand Duke Alexis, is Vice-Admiral Chestakoff. The Minister of Public Works is Vice-Admiral C. Possiet, appointed in 1874.

(For area and population, see "Annual Cyclopædia" for 1884).

Finances.—The amount of gold in the treasury on Jan. 1, 1885, was 92,815,732 rubles, 55,380,091 rubles more than the year before; the amount of silver 6,254,254 rubles, 52,203 rubles more. The net sum paid out to the subsidized railroads in 1884 was 39,329,671 rubles. The total amount required for the interest and sinking fund of the public debt in 1884 was 204,971,245 rubles.

Tariff Changes.—The decrease in the imports of manufactured and partly manufactured articles in 1884 is attributed to the recently augmented tariff on iron and other articles. On July 13, 1885, an increase in the customs duties on a large number of articles went into operation. The duty on silk has been doubled, in order to encourage Russian sericulture. The duties on food and animal produce, and on all kinds of manufactures, are largely increased. The increase in the tariff is 10 per cent. on tin and manufactures thereof, gold, silver, glass, paper, cotton manufactures, buttons, etc., and 20 per cent. on all other articles, excepting wool, silk, cotton, yarn, iron and steel, lead, brass, copper, sugar, tobacco, spirits and wine, ores, gums, dyes, machinery, cutlery, agricultural machinery, rubber, railroad-cars, and various chemicals, articles of food, and materials and plant. The duty on tea imported overland is reduced; that on pig-iron has been increased to 9 copecks a pood, and is to be raised to 15 copecks within two years.

The Navy.—The Baltic fleet in 1884 contained 33 ironclads, and the Black Sea fleet 7 ironclads. The most powerful vessel is the mastless turret-ship "Peter the Great," with 14-inch armor. Three larger vessels, the "Catharine II," "Tchesma," and "Sinope," with plates 15 to 16 inches thick, carrying six 12-inch and seven 6-inch guns each, will be launched in 1886. Two other powerful armor-clad vessels, the "Admiral Nakhimoff," with plates from 8 to 10 inches thick and four 9-inch and ten 6-inch guns, and the "Alexander II," with 14-inch plates and two 12-inch, four 9-inch, and eight 6-inch guns, were launched in 1885. The next most powerful vessels are 5 belted cruisers. There are besides 4 turret-ships, 2 circular ironclads, and a number of monitors, floating batteries, etc. The navy was manned in 1884 by 24,512 sailors. (For army statistics, see "Annual Cyclopædia" for 1884.)

Navigation.—The number of vessels entered at the Baltic ports in 1883 was 6,984; at the ports of the Black Sea, 4,502; in the White Sea, 712; in the Caspian, 962; total, 13,160, of which 6,840 were laden and 6,320 in ballast. The number of steamers included in the total number was 7,889. The total number of vessels cleared was 12,794, comprising 11,075 with cargoes and 1,719 in ballast; the number of steamers cleared was 7,775. The number of coasters entered and cleared was 35,083, of which 16,488 were steamers. The merchant fleet in 1883 consisted of 2,139 sailing vessels, of an aggregate burden of 467,740 tons, and 204 steamers of 157,696 tons.

The St. Petersburg Sea-Canal.—The ship-canal connecting St. Petersburg with the Baltic was formally opened on May 27, 1885. The canal enables vessels drawing 18 feet to enter the Neva, which was before inaccessible to vessels of a deeper draught than 11 feet. The length of the canal is 30 versts, or 19·89 miles, of which 3½ versts are branches. The main channel is 22 feet deep, and the branches from 16 to 20 feet. The channel is 50 fathoms wide at the Cronstadt end, and 30 fathoms where it enters the Neva. The excavation was begun in 1878. The quantity of silt removed from the bed of the canal alone was 14,464,281 tons, and the cost of excavation 10,265,400 rubles. At St. Petersburg one basin, with an area of 46,000 square fathoms, has been constructed, capable of accommodating from 15 to 35 steamers, besides the Patiloff basin, 13,000 square fathoms, capable of holding 10 steamers. The main harbor has not been excavated.

Railroads.—The total length of railroads in operation at the beginning of 1885 was 25,010 kilometres, not including the railroads of Finland and the trans-Caspian line, 231 kilometres long. The receipts in 1884 amounted to 226,572,545 rubles; the number of persons carried was 36,962,811, including 2,287,958 soldiers.

Posts and Telegraphs.—The number of letters carried in 1883 was 133,883,693, besides 10,310,429 registered letters, 15,138,840 inclosures under bands, 10,169,770 inclosures of money and valuables, and 2,035,785 postal-cards; the number of newspapers and periodicals forwarded was 99,439,595; the amount of remittances declared, 2,813,918,031 rubles.

The total length of telegraph lines in 1884 was 109,778 kilometres, with 248,470 kilometres of wires. The length of the state lines was 101,697 kilometres, with 189,316 kilometres of wires. The number of internal dispatches in 1884 was 8,599,295, of international dispatches received, 563,421; sent, 576,038; of transit dispatches, 136,556; official dispatches, 595,774. The receipts in 1884 were 35,371,696 francs; expenses, 17,482,812 francs for salaries; 12,848,720 francs for working and repairs; and 2,400,000 francs for the construction of new lines.

Agriculture.—European Russia is divided in respect to its agricultural resources into the black-earth zone of the south and east, and the zone without black earth. In the former, the main part of the wheat-product is grown and the greater portion of the rye and other cereals, also the principal part of the tobacco and sugar-beet products. In the latter potatoes are more extensively cultivated, and the whole of the flax-crop is produced. The two divisions are nearly equal in the number of horses, cattle, and swine raised, but almost two and a half times as many sheep are raised in the black-earth districts as in the other parts of Russia. Of the total area of Russia in Europe, about one quarter is arable, one quarter grazing waste land, three eighths forest, and one eighth meadow. Of the cultivated land, the main portion is devoted to grain, 62,921,280 out of 94,577,000 desiatines (1 desiatine = 2·7 acres). There are under rye 23,623,000 desiatines, producing 589,942,000 bushels, and under wheat 11,460,000 desiatines, producing 188,950,000 bushels. The total annual value of the products of the soil is about $2,250,000,000, the value of the crops being 2,138,262,500 rubles and that of the domestic animals raised annually 861,515,700 rubles. Russia raises more horses than any other country, though, since the emancipation of the serfs and the spread of the Siberian plague, horse-breeding has decreased.

The Russian forests, except those on the imperial estates, are being rapidly destroyed, and at the present rate of consumption will not last fifty years. The annual value of the wood and timber consumed is 260,250,000 rubles, besides the export of 30,000,000 rubles.

A drought in the early part of the summer damaged the spring-wheat crop of 1885; but the crop of winter wheat was above the average, and the rye-crop was a little better than the average. The yield of winter wheat exceeded the crop of 1884 by about 8,000,000 bushels, or 8 per cent., while there was a decrease of 56,000,000 bushels, or 24 per cent., in spring wheat. The total harvest of wheat was about 288,000,000 bushels, which is 48,000,000 bushels below the average. The rye harvest gave an increase of 80,000,000 bushels above the average, while the oat-crop fell short 200,000,000, or about 25 per cent.

Industry.—In 1880 there were 27,927 manufacturing establishments, employing 689,452 laborers, with an annual production valued at $454,500,000. In 1879, owing to the impetus received from the war, the total value of manufactures was $535,942,050, the cotton manufactures being valued at $134,360,000; woolen manufactures, $63,236,000; silk manufactures, $4,963,000; flax and hemp manufactures, $16,840,000; minerals, $6,550,000; glass and pottery, $5,250,000; chemicals, paper, leather, etc., $70,702,000; metal products, $62,118,500; alimentary articles, $162,689,000. The products of house industry, which plays an important part in Russian national economy, are not included in these estimates. More than $25,000,000 worth of linens, $39,000,000 worth of cottons, $30,000,000 worth of hempen fabrics, besides leather, saddlery, furniture, cutlery, nails, and many other products, are made by the peasants in their villages.

Commerce.—The exports in 1884 were of the total value of 550,505,000 rubles, as against 607,787,000 in 1883. The exports of alimentary products amounted to 332,970,000 rubles, showing a decrease of 40,892,000 rubles; the exports of raw and prepared materials, 196,936,000 rubles—a falling off of 14,088,000 rubles; those of animal products, 13,751,000 rubles—a falling off of 2,148,000 rubles; those of manufactured articles, 6,848,000 rubles—a falling off of 154,000 rubles. The decrease in the exports of alimentary products was mainly due to the lessened export of wheat, which was 129,932,000, against 170,194,000 rubles. The decrease in quantity was 15,569,400 bushels. The export of spirits fell off nearly one half, and that of linseed was 8,000,000 rubles less in value; while eggs, meat, and tobacco showed a large increase.

The imports in 1884 amounted in total value to 486,249,000 rubles, against 513,700,008 rubles in 1883. The imports of alimentary products were 129,291,000 rubles—6,145,000 rubles more than in 1883; the imports of raw and prepared materials, 262,659,000 rubles—25,972,000 rubles less; the imports of animal products, 324,000 rubles—77,000 rubles less; the imports of manufactures, 93,975,000 rubles—7,556,000 rubles less. The imports of raw materials were 8 per cent., of manufactures 24 per cent., of alimentary products 11 per cent., of animal products 68 per cent. less than the average imports for the period 1879–'83. The imports of raw cotton fell off from 93,864,000 rubles in 1883 to 76,176,000 in 1884; those of wool, from 22,431,000 to 18,607,000 rubles;

those of iron and steel, from 18,093,000 to 16,102,000 rubles; those of lard, from 16,082,000 to 14,564,000 rubles. The imports of tea and wines increased.

Petroleum.—Russian petroleum has driven the American product out of the home market, and is a dangerous competitor in central and southern Europe. It yields an illuminating oil that is claimed to be as good as the American when thoroughly refined. The residuum is largely used as fuel on the Caspian Sea and the Volga. Kerosene is retailed in St. Petersburg at two cents a pound. Russian petroleum is brought into Germany in tank-cars, and is exempt from the duty that is levied on petroleum-barrels. It is also brought into central Europe by way of Fiume, Trieste, and Genoa. The export of illuminating oils over the European land frontier increased from 399,000 poods in 1883 (1 pood = 36 pounds) to 1,224,000 poods in 1884, that of purified lubricating oil from 361,000 to 523,000 poods, while that of raw lubricating oil decreased from 1,092,000 to 647,000 poods, and that of raw naphtha from 195,000 to 2,000 poods. There was an export of 1,400 poods of vaseline, paraf, fine, etc., in 1884. The exports from Batoum-Poti, and Novorossiski, in 1884, were as follow: raw naphtha, 93,000 poods; naphtha refuse, 602,000 poods; illuminating oil, 4,617,000 poods; lubricating oil, 292,000 poods; vaseline, 450,000 poods. The output of crude naphtha increased from 25,000,000 poods in 1880 to 60,000,000 in 1883; that of manufactured petroleum from 7,858,750 to 14,252,626 poods. The shipments of petroleum from Baku in 1883 amounted to 11,843,964 poods; of refuse, 17,421,910 poods; of raw naphtha, 1,790,663 poods; of lubricating oil, 1,001,385 poods. The price of Russian petroleum in St. Petersburg in August, 1884, was from 1·30 to 1·35 rubles per pood, that of Nobel's manufacture from 1·50 to 1·55 rubles, while American kerosene was quoted at 2·65 rubles. The imports of illuminating oils, benzine, and purified naphtha, were 449,000 poods in 1883, valued at 1,194,000 rubles, and in 1884 269,000 poods, valued at 449,000 rubles.

There are 400 wells in the vicinity of Baku, about half of which are worked. The oil-field is not more than 3½ miles square. It is supposed that oil-wells underlie at least 1,000 or 1,200 square miles of the Apsheron Peninsula. The yield of the flowing wells is enormous. When not worked they are stopped with valves, to prevent waste and damage. The oil spouts up, when the cap of a covered well is removed, in a steady column 100 feet high. In some the pressure is 200 pounds to the square inch, and the jet rises 300 feet. One of Nobel's wells yields 1,125,000 gallons a day whenever opened, and some of the others are more productive. The average depth of the wells has been increased from 154 feet in 1874 to 450 feet in 1883. The average level is lowered 56 feet for every 500,000,000,000 gallons extracted. In 1884 the production was 1,130,000 tons. In the United States the production was about 3,000,000 tons, and the price from $4 to $8 a ton, as compared with 60 to 80 cents in Baku. In the Black Town at Baku there are 200 refineries, not more than sixty of which were in operation in 1884. The lamp-oil manufactured in the Nobel refineries is almost free from color and odor, with a specific gravity of ·821, and a flashing-point of 86·6° Fahr. The crude petroleum yields 27 per cent. of this quality of oil, and 35 per cent. of a lower grade. The residuum, called *astatki*, has a specific gravity of ·903. The crude oil differs from that of Pennsylvania in being practically free from the solid hydrocarbons. Oil is produced on the island of Tcheleken, on the opposite side of the Caspian Sea, containing as much as 6 per cent. of solid hydrocarbons. The lubricating oil obtained from the Baku naphtha bears a temperature below zero without solidifying. In 1884 Nobel's factories turned out 157,100 tons of kerosene, and the other refineries at Baku 84,000 tons. The domestic kerosene is protected in Russia by a duty of 6 cents a gallon, increased 20 per cent. by the new tariff. Tested in comparison with American illuminating oil, it was found that the Russian oil was inferior in illuminating power; but the diminution of light as the oil fell in the reservoir of the lamp was less than with the American oil. Experiments with astatki as fuel for steam-engines show that 1 pound vaporizes 12 pounds of water, and in a lately patented apparatus 14½ pounds. Its freedom from phosphorus and sulphur makes it valuable for metallurgical purposes. It costs in Baku 36 cents a ton. By a process of distillation 75 to 100 cubic feet of illuminating gas, five times more powerful than coal-gas, are obtained from a cubic foot of astatki, besides benzol, anthracene, and naphthaline. It has been adopted by the Government as fuel for torpedo-boats. Petroleum, kerosene, and astatki are shipped from Baku in bulk to the Volga, in small sailing vessels, and in tank-cars over the Baku-Batoum Railroad.

Nihilism.—The revolutionary doctrines continue to spread in Russia, despite the success of the police in bringing to punishment many of the active and leading Nihilists. In March about forty Nihilists were arrested in St. Petersburg. In consequence of the discovery of Terrorist proclamations and explosives in the lodging of a student in Dorpat, a few days later, more arrests were made in St. Petersburg. In May, a sub-inspector of police was shot dead at Kharkov while searching the lodgings of a person with a false passport, in whose possession were a secret printing-press, explosives, and arms. Lissianski, the perpetrator of the murder, was tried before a military court and condemned to death. A monster trial began in Warsaw on Nov. 28. Among the prisoners were Bardovski, a police justice; Ingelstrom, nephew of a Russian general; Sokolnicki, an artillery lieutenant; Luvy, an officer of engineers; Warznski, a lawyer; Kuznicki, a civil engineer of St. Petersburg; Dr. Rechnievski, of Moscow University; Janowicz, a large land-owner of Lithuania; several Warsaw journalists, and five working-men. They were charged with belonging to the central committee of a Warsaw society called the Proletariat, allied to the executive committee of the Narodnaya Volya, with organizing workmen's committees throughout Poland, with making an attempt on the life of the Emperor by laying a mine in a street of Warsaw, and with murdering two police agents. The proceedings were conducted with the utmost secrecy. Bardovski, Kuznicki, and four others were condemned to be hanged, and the other twenty-two prisoners were sentenced to long terms of penal servitude.

Industrial and Agrarian Disturbances.—The industrial depression in Russia was attended with more frequent and lawless disturbances than occurred in any other country. There was a curtailment of production in most industrial branches in the early part of 1885, and the mujiks, who had been driven into the factories by agricultural distress, were worse off than before. The majority of employers of labor are foreigners, Germans or Englishmen. In their differences with the workmen, the authorities sided with the latter in many instances. Some of the mill-owners are more solicitous for the comfort and welfare of their employés than the employers in other countries, providing them with sanitary houses, hospitals, medical attendance, schools, and amusements. In their establishments no disturbances occurred. Others are exacting and unscrupulous. A system of fines is frequently resorted to, by which as much as one quarter of the wages of the mill-hands is withheld from them. The working-men are extensively indoctrinated in the theories of Nihilism, and organized by revolutionary emissaries, who disguise themselves as factory-hands. Police spies hire themselves out as workmen for the purpose of ferreting out these Nihilist organizations. Frequently an employer finds his business thrown into confusion by the sudden arrest of a large number of his workmen. When the employers began to dismiss their employés in large numbers in the winter of 1884–'85, the men committed many acts of destruction and violence. The police interfered and cautioned them not to send away more than a few men at a time. Many masters in the iron and cotton industries were compelled to work their mills at a loss, for fear of offending the authorities or provoking the men to violence. In January, 1885, a strike began in a cotton-mill on the Moscow and Jaroslav Railroad. The men in another mill struck work and wrecked the factory and provision-stores. The strikes and riots spread then to all the factories in the district, and a large force of Cossacks was not able to restore order. Later in the year the industrial situation improved.

Agrarian discontent continued to produce rural disorders in 1885. The peasantry are dissatisfied with their insufficient allotments, which are continually growing smaller by subdivision among their children. They manifest their discontent by burning the crops or destroying other property of their former masters. The tax-gatherer that comes to confiscate the last cow of an impoverished mujik for arrears of payment is frequently set upon and beaten nearly to death. Sometimes the peasants of adjoining villages dispute with one another the possession of a piece of land. In a quarrel of this nature near Elizavetpol, in July, fire-arms were freely used. About the same time 298 peasants were sentenced to a month's imprisonment for destroying a mill, the owner of which had deprived them of a piece of pasture-land. Such disturbances were frequent in various parts of Russia.

Russia and the Bulgarian Revolution.—When Russian diplomacy, supported by the influence of Prince Bismarck, opposed the union of the two Bulgarias in the Constantinople Conference, the Slavophiles in Russia vigorously attacked the policy of the Government. The Slavonic societies, the Russian Red Cross, and the Slavophile press, have been useful instruments for the accomplishment of Russian designs in the Balkans. The Government, though anxious to reverse the popular revolution in Roumelia and to degrade Prince Alexander of Bulgaria, was reluctant to quell the ardor of Slavophile sentiment, which the next turn of affairs in the Balkan lands might bring into accord with its own purposes. At length, in the beginning of December, an interdict was placed upon the freedom of expression previously allowed.

Immediately after the Roumelian *coup d'état* the Emperor ordered Prince Cantacuzène, the Russian who was Minister of War at Sophia, to resign, forbade the entry of Russian volunteers into Bulgaria, and interdicted the Russian officers in the Bulgarian army from giving any assistance to the revolutionary government in Roumelia. In consequence of these orders, the Russians that held the higher posts in the Bulgarian army resigned and returned to Russia. On Nov. 5 the Czar struck Prince Alexander's name from the Russian army list, declaring him to be unfit to hold an honorary command in his army.

The Baltic Provinces.—The rejection of the suit of the German nobility and the municipalities in the Baltic provinces for the confirmation of their privileges allows the work of Russification to be openly proceeded with by the Imperial Government. These privileges, granted by Peter the Great, guaranteed autonomous government, the preservation of the provincial laws and customs, the preservation of German as the official language, and of the Lutheran as the established Church. The mixed agrarian and national movement of the Letts and Esthonians, and the disturbances and incendiarism resulting from its repression by the Germans, gave the occasion for a commission of inquiry and a revision of the provincial system of government. The laws are being revised and brought into harmony with the Russian system of jurisprudence. Russian governors have been appointed in Revel and Riga. The Russian language has been introduced in official correspondence. The Vice-Governor of Courland has made Russian the official language in various departments of the administration. Russian procedure has been introduced in Dorpat and Riga. In Livonia the imperial authorities have assumed control of the police. In the gymnasia the Russian language and Russian national history are made the most prominent branches of study. The preparatory schools are to be transformed into Russian schools, but the towns threaten to withdraw their contributions from the schools. The Germans have already started gymnasia and district schools with private means. The elementary schools, in which the Ruthenian language is used and which are a bulwark of the Lutheran Church, are undergoing a systematic Russification. Converts to the Greek faith are exempted from all ecclesiastical dues. Within a year about 5,000 persons have gone over to the Russian Church, which by a ministerial decree has been declared the state religion, and the Lutheran confession reduced to the position of a tolerated sect. All children born of mixed marriages must be baptized into the Greek faith, as in the other parts of Russia.

Finland.—The Grand Duchy of Finland retains the representative system of government preserved to the Finns at the Diet of Borgo. The area of the country is 373,603 square kilometres; the population numbers 2,142,093 souls, divided into 1,050,205 males and 1,091,888 females. The number of marriages in 1883 was 16,546, the number of births 78,550, of deaths 46,463. The receipts of the treasury in 1885, according to the budget estimates, were 47,024,724 marks, or francs, and the expenditure the same. The public debt on Jan. 1, 1885, amounted to 67,224,390 marks. The total value of the exports in 1882 was 119,800,000 marks, of which 54,500,000 marks represent the exports to Russia, 24,400,000 marks those to Great Britain, and 10,400,000 marks those to France. The total value of the imports was 167,100,000 marks, 71,700,000 marks from Russia, 42,600,000 marks from Germany, 15,900,000 marks from Great Britain, 13,700,000 marks from Sweden and Norway, and 23,200,000 marks from other countries, of which 2,200,000 marks came from the United States. The length of railroads in operation in October, 1885, was 1,324 kilometres, all but 33 kilometres belonging to the state. Finland has been spared the Russianizing activities displayed in Poland, the Baltic provinces, and Armenia. The Finns are divided into three political parties, the Finnomans, the Svecomans, and the Liberals. The Finnish party desire Finnish, which is spoken by nine tenths of the people, to be recognized as the only official language. The Swedish party contends for the retention of Swedish as one of the official languages. The Russian authorities recognize the two languages, but the Finnish National party is favored by the Russians. The Liberal party places constitutional and political questions above those of language and nationality, and seeks to unite the people for the protection of their political freedom.

Armenia.—The Russian authorities have endeavored to extirpate the national spirit that is exceedingly strong among the Armenians, and have thereby aroused in that nation a profounder distrust and dissatisfaction than was felt under Turkish rule. For many years young Armenians have migrated from the Russian to the Turkish provinces. A section of the Armenians was formerly inclined to join the Russian Revolutionary party in their struggle against the despotism of the Czar, but more recently the purely National Home-Rule party has united the entire nation in resisting the efforts of the Russian authorities to uproot the national spirit. Alexander II promised to restore Armenian rights, but the officials of the present Emperor have undertaken to gain control of the Armenian Church and to suppress the national schools. While the post of Catholicus was vacant, an order was issued to take possession of the Armenian schools, which was carried out by the aid of the military.

The Russians in Asia.—Russian activity on the Chinese as well as near the Indian frontier led to overtures for a military alliance between the Salisbury Cabinet in England and the Imperial Government at Pekin. The area of Merv and the other districts in Turkomania, annexed in 1885, is estimated at 157,000 square kilometres, with a population of 450,000 souls. The trans-Caspian territory previously annexed was 365,000 square kilometres, with a population not exceeding 260,000. The Trans-Caspian Railroad was completed to Askabad and the Merv section begun before winter. Sarakhs, Askabad, and Merv were fortified. Great expectations are entertained of the commercial advantages of the extension of the Trans-Caspian Railroad to Bokhara and Samarcand, bringing the populous portions of Central Asia into communication with Baku, Petrovsk, and the manufacturing districts of Russia. The trade of Central Asia is expected to follow this route, instead of finding its way across the steppe of Kizel Kum and around by way of Orenburg. The alternative route opened by Tchernaiev, by way of the Oxus and Kungrad and across the Ust Yurt steppe to the Caspian Sea, Astrakhan, and the Volga, will be abandoned for the line of steam communication, which is being pushed on to completion with restless energy. The English and Russian boundary commissioners met on the Afghan frontier toward the end of November. (See AFGHANISTAN and INDIA.)

By the close of the year the work of delimitation had been completed in the debated zone between Zulfikar and Meruchak.

The island of Saghalien has been made a penal and agricultural colony, and many political prisoners have been transported thither.

The general government of Turkistan now embraces an area of 611,000 square versts, with a population of 2,335,000 souls, including 905,000 nomads. Silk is the leading commercial product. The cultivation of American cotton is extending. Dried fruits and animal products are other exports. The exports to Russia are valued at 10,800,000 and the imports from Russia at 12,000,000 rubles annually. The Russification of the province is to be accelerated by colonization. The nomads are to pay a tax of four rubles per kibitka, but those who settle in a fixed domicile are exempted from the ordinary land-tax.

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SALISBURY, ROBERT ARTHUR TALBOT GASCOYNE CECIL, Marquis of, Prime Minister of Great Britain in 1885, born at Hatfield in February, 1830, a younger son of James, the second Marquis of Salisbury, by his marriage with a daughter of Mr. Bamber Gascoyne, M. P. He was educated at Eton and Oxford, where for some time he was a fellow of All Souls College. Lord Robert Cecil became noted in journalism by his contributions to the "Saturday Review," written in the caustic and witty vein that characterized that journal, of which his brother-in-law, Beresford Hope, M. P., is the proprietor. He became one of the principal writers on the staff of the "Standard," and was also a frequent contributor to the "Quarterly Review." He was elected a member of Parliament for Stamford; and sat for that borough from 1853, until he entered the House of Lords in 1868. He became the champion of High Tory principles, and clung with logical consistency and conscientious fidelity to the doctrines of Conservatism. The Liberal tendencies of the time he denounced as a deviation from the historical order of development of the British Constitution. Being a foe to every political shift and compromise, he was deemed unpractical and deficient in the qualities of a statesman, though his oratorical talents, his brilliant wit, and cutting sarcasm, his dialectic powers and shrewd acumen in detecting the logical inconsistencies of his opponents, made him an invaluable supporter of the Conservative cause, except when he turned his rhetorical weapons against the leaders of his own party. When Mr. Disraeli assumed the leadership of the Conservative party, and began to educate them in the new school of Toryism, Lord Cranborne (which was the title that legally belonged to Lord Robert Cecil after the death of his elder brother) decried the new politics, and stigmatized their author as an adventurer. He entered the Cabinet as Secretary of State for India in 1866, but when Disraeli brought in his reform bill he resigned in angry indignation, declaring that such an act of political treason had no historical parallel. Yet, in 1874, Lord Salisbury took office under Disraeli, becoming again Indian Secretary. From that time he has been a more pliant and practical politician, though oftentimes his old spirit of uncompromising adherence to his political ideas has brought him into open conflict with his ministerial colleagues. Disraeli recognized the services and great abilities of his insubordinate lieutenant, and with good-humored sarcasm sought to depreciate the significance of these awkward collisions, characterizing Lord Salisbury as "a great master of quips, and flouts, and jeers." The Marquis of Salisbury came to entertain cordial and friendly relations with the statesman he had formerly censured so unsparingly. In 1876 Lord Salisbury went to Constantinople as special ambassador to the conference held in November of that year. He was persuaded to approve Ignatieff's proposal for an international guardianship over Turkey, a scheme that facilitated the outbreak of the Russo-Turkish War. In 1878, on the retirement of Lord Derby, he became Secretary of State for Foreign Affairs. He mastered the business of the office with a rapidity unexampled in the traditions of the place, and soon launched out on an independent and original course, for which he and Lord Beaconsfield are held jointly responsible, and which brought upon them the anathemas of the opposite party. The cordial relations with Germany, established at the Berlin Conference, and cultivated after the formation of the Austro-German alliance, enabled them to pursue an ambitious Continental and Indian policy without encountering formidable resistance, except at home. They are credited with having conceived the scheme of sundering the coast states of northern Africa from the Turkish Empire and establishing British supremacy in Egypt. The costly wars in South Africa and Afghanistan furnished Mr. Gladstone with the matter for an eloquent assault, under which the imperial policy went down in the popular elections of 1880. In opposition, and deprived of the mollifying influence of his deceased chief, Lord Salisbury again displayed an impolitic vehemence and an uncompromising obstinacy on questions of domestic policy, which seemed to render him impossible as a party leader or Cabinet chief. With the Tory majority in the House of Lords at his back, he resisted Gladstone's Irish legislation until the abolition of the House of Peers was earnestly discussed by the Radicals and found a popular echo. He yielded at last on the Irish land bill, but would accept no compromise on the question of arrears of rent. His party deserted him, and intrusted the leadership to Sir Stafford Northcote, preferring the guidance of a safer man, who would not plunge them into a dangerous reactionary revolution. He declared that, when the reform of the upper house became a subject of the day, he would abide by the principle that "any institution which could not hold its own ground on the free and fair discussion of its merits should cease to exist." The rivalry between Sir Stafford Northcote and Lord Randolph Churchill in the House of Commons, and his own sagacious as well as vigorous conduct of the parliamentary contest over the reform bill, reinstated him in his position at the head of the party. Sir Stafford Northcote offered no serious resistance to the efforts of the rising and popular leader of the Tory Democracy to supplant him. The Marquis of Salisbury and Lord Randolph Churchill seemed likely to draw out the full strength of the Conservative vote in the coming election. When the Gladstone Cabinet suddenly threw up their portfolios (see GREAT BRITAIN), Lord Salisbury was the statesman whom the Queen preferred as Prime Minister, and whose experience and influence in foreign politics were needed to put an end to the vexatious misunderstandings and petty quarrels that paralyzed England's action and diminished her influence. Prince Bismarck welcomed his accession to office as indicating a return to a consistent and rational policy. The Afghan and the Egyptian questions were settled in accordance with the intentions of the late Cabinet. When the Eastern question was reopened by the Roumelian revolution, Lord Salisbury, by espousing the cause of the Bulgarian people and their prince, and resisting successfully the conclusions of the combined Continental powers, regained for England her position as a leading arbiter of the destinies of southeastern Europe and her influence as a friend both of Turkey and of the rising young nationalities of the East, and their defender against absorption by the neighboring empires. On social and economical questions Lord Salisbury has maintained the principle of the liberty of the individual, though not opposed to a moderate measure of state interference for the protection or benefit of the working-classes. He was the special advocate of legislative action to secure the better housing of the poor. His appearance on the floor of Parliament is striking and commanding. He is tall, with a slight stoop of the shoulders, a thick, heavy, dark-brown beard, delicate features, and remarkably clear and flashing eyes. His voice is strong and ringing. His combative and satirical style of oratory and impetuous vigor in denunciation leave the impression of a gloomy political pessimist, and explain the character formerly given to him of a champion of a defeated cause, a Prometheus tortured by the Radical vulture. In private life he is amiable and genial, charming in manners and in conversation, a thorough example of old-fashioned English courtesy. As the head of an illustrious family of the older nobility, descended from Queen Elizabeth's minister Lord Burleigh, as the hospitable master of Hatfield House, one of the most beautiful country-seats in England, and as the possessor of a fortune of £50,000 a year, the Marquis of Salisbury possesses rare social adjuncts to his political and diplomatic abilities. His wife, a daughter of the late Baron Alderson, whom he married in 1857, entered sympathetically and with fine tact into the social part of the minister's life, and bore herself proudly as the great Tory dame, with a somewhat haughty reserve toward the unaristocratic representatives of the party. The Marquis of Salisbury is known as a benevolent landlord. He is devoted to his family, a devout and consistent Christian, and learned in theological science and church lore. He has also given much attention to chemical studies. With literary, historical, and classical knowledge, he has the ready familiarity necessary for a great parliamentary orator and a brilliant political writer.

SALVADOR, a republic of Central America. Area, 18,720 square kilometres; population, 613,273.

Government.—The Provisional President (since June 19, 1885) is Gen. Francisco Menendez, the victorious soldier who, after the death of Gen. Barrios, carried the war into Salvador, being one of Barrios's chiefs, and finally assumed the dictatorship there. His Cabinet was composed of the following ministers: Foreign Affairs, Justice and Public Instruction, Dr. Rafael Meza; Finance and Interior, Señor José Antonio Quirós; Public Works, Señor Cruz Ulloa; Commerce and Charitable Institutions, Dr. Francisco E. Galinda; and Secretary-General of the Ministry, Dr. Eugenio Araujo.

Education.—In December the Constituent Assembly approved the articles of the Constitution declaring public instruction in Salvador to be laic, gratuitous, and obligatory, prohibiting all monasteries, and guaranteeing the free exercise of religion.

Railroads.—The only railway in operation throughout its entire length is the one of fifteen miles from the port of Acajutla to Sonsonate. One between the latter place and the port of La Libertad, forty miles, is in course of construction. In November the Government made a contract with Señor Francisco Camacho, representing the Salvador Railway Construction Company, to finish this latter line from Salvador to Santa Ana. The Government guarantees the interest on bonds.

In February the Government granted to Messrs. Francisco Camacho and Encarnación Mejía the exclusive privilege for ten years of running a line of horse-cars in the capital.

Telegraphs.—Over the 2,100 miles of telegraph in operation in 1883, there were sent in that year 151,528 messages, 96,404 of which were private and 55,124 Government.

Import Duties.—In March the Government decreed a 20 per cent. increase of import duties, payable in gold, and on July 7 another decree dispensed thenceforward with the legalization abroad of manifests and invoices intended for ports of the republic. On June 1 the Government abolished the export duty on coffee of 12½ cents the 100 pounds.

A New Silk-worm.—In the summer of 1885 Dr. Guzman, of Salvador, discovered in the interior of the country a new silk-worm, which feeds on the leaves of the *Tecoma sideraxilum*, and the Assembly of Salvador immediately extended privileges and aid to him for the purpose of utilizing the discovery.

Finances.—The actual revenue and expenditure of the republic during 1884 were as follow: Income, $4,067,000; outlay, $4,057,000.

The public indebtedness amounted, on Oct. 1, 1883, to $1,575,292 of bonded debt, and $3,046,197 floating debt.

On Aug. 26 Gen. Menendez issued a decree suspending payment of all engagements made by the previous administrations between May 1, 1876, and June 21, 1885, except the following: 1. The treasury notes issued by the Government under decree of March 12. 2. The treasury notes issued for military purposes under the decree of June 18, 1885. 3. All salaries that may be due to school-teachers. 4. Whatever money may be due to army tailors for the accoutrement of the army.

Commerce.—The commercial movement has been as follows:

FISCAL YEAR.	Import.	Export.
1882	$3,170,056	$5,227,050
1883	2,401,462	5,861,054
1884	2,646,628	6,065,799

There entered ports of the republic, during the first nine months of 1883, 268 vessels, 205 of which were steamers, of a joint tonnage of 334,894; and there left 270, of which 205 were steamers, measuring together 354,092 tons.

SANDWICH ISLANDS. See HAWAIIAN ISLANDS.

SANTO DOMINGO, a republic occupying the eastern portion of the West Indian island of that name, the western portion being Hayti. Area, 53,343 square kilometres. The population of the republic is 350,000; that of the capital, Santo Domingo, 20,000.

Government.—In May, Don Francisco Gregorio Billini resigned the presidency of the republic, because his government programme had met with opposition from certain important newspapers. The President is Gen. Alejandro Wos y Gil. His Cabinet was composed of the following ministers: Interior and Police, Señor Alfredo Deetjen; Foreign Affairs, the lawyer Señor José de Castro; Justice, Public Works, and Instruction, Señor Domingo A. Rodriguez; Finance and Commerce, Señor R. R. Boscowitz; and War and the Navy, Gen. Eugenio Miches. The Dominican Minister at Washington is Don José Manuel Macías; the Consul at New York, Señor H. Billini; the American Minister at Santo Domingo is Hon. J. M. Langston; the Consul at Puerto Plata, T. Simpson; and at Santo Domingo City, H. C. C. Astwood.

Finances.—On Jan. 1, 1884, the public indebtedness was $5,392,437. In October, 1885, an arrangement was made in London with the Haumont bondholders, by virtue of which a compromise was arrived at, the latter accepting 50 per cent., £261,561 of new bonds to be issued in the place of double the amount of old bonds, the interest on the new bonds to be 4 per cent. the first year, 5 per cent. the next, and 6 per cent. per annum till the bonds are due; the new bonds to be received at par in payment for Government lands and mines; the first coupon to be paid on May 1, 1886. Simultaneously the Government raised the import and export duties sufficiently to produce £60,000 additional per annum, and in June, 1885, it was shown that in January, February, March, and April, the home debt had been reduced $274,433. On May 1, 1885, the home debt did not exceed $1,855,081.

Commerce.—The amount of goods imported into Santo Domingo in 1883 was $3,142,102, while the export did not exceed $2,129,266. The import into Puerto Plata in 1884 amounted to $908,919, paying $550,693 duty. There was at the same time exported produce to the amount of $971,630, the export duty levied thereon being $67,083. The American trade was as follows:

FISCAL YEAR.	Imports.	Exports.
1883	$1,417,519	$1,179,200
1884	1,439,853	1,257,969
1885	1,461,419	962,428

The chief article exported from Santo Domingo in 1885 was sugar, 42,523,746 pounds, worth $1,332,684. The domestic exports consisted mainly of 29,014 barrels of flour, 2,550,037 yards of cotton goods, $121,782 worth of machinery, etc., $133,874 of provisions, and $119,332 of lumber.

Army.—On June 8 Congress passed a bill organizing the military forces of the country, in accordance with which military service is compulsory, and embraces all men capable of bearing arms, from the age of 18 to that of 50.

Education.—With the exception of the capital, two or three towns on the coast, and four or five in the interior, there is a deplorable absence of schools. In the capital the municipality supports an institution where jurisprudence, medicine, surgery, and mathematics are taught. Only twenty students attend. There is a normal school, and there are several preparatory ones, all supported by the city. There are two private colleges, and in all the republic about 120 schools, paid by the municipalities.

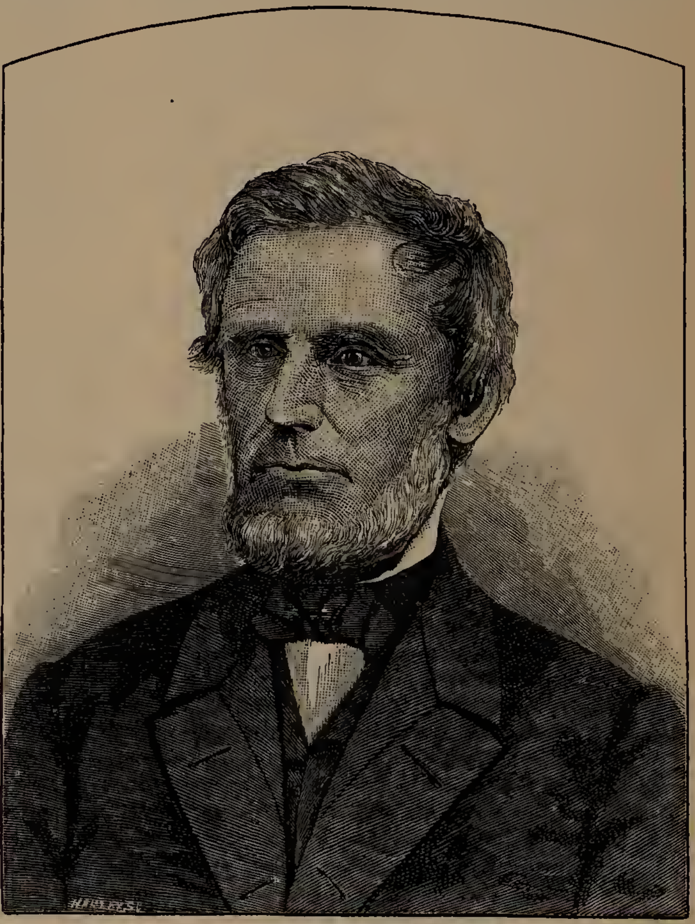
Railroads.—Alexander Baird, proprietor of the Samaná and Santiago Railroad, reported during the summer that the work on this road was progressing satisfactorily. The idea was to run the road from Samaná Bay up through La

Vega Real, a beautiful wide valley, containing the richest land in San Domingo. But at the end of the bay the land is low and swampy, and it was necessary, first of all, to construct the road over a marsh nine miles across, over which a cat could scarcely walk without sinking. Authority was given in May to George H. Blake to construct a railway that is to traverse the island from south to north. Starting from Las Calderas and passing through the towns of Ayna and San Juan, then ascending the Cordillera at Sabaneta, it is to continue in a straight line until it reaches the bay of Manzanillo. In August a concession was granted to the French engineer, M. Thomasset, to build a railroad between the capital and the town of San Cristobal.

Tobacco.—Bad crops, for lack of sufficient rainfall, and poor prices in Germany, the only market for Puerto Plata tobacco, have, of late years, caused a notable decrease in tobacco production. In 1872–'75 Puerto Plata still exported 125,000 to 170,000 quintals annually; between 1876 and 1881 the export fluctuated between 31,000 and 110,000 quintals; since then it has recovered somewhat, the export in 1884 being 105,514 quintals.

Water-works. — A contract was made in August with Messrs. Manuel de J. Delgado and A. Pomayrac to provide the city of Santo Domingo with water from Higuero river by means of an aqueduct.

German-Dominican Treaty. — The new treaty of commerce, navigation, and consular service, signed at Berlin on Jan. 30, 1885, confirmed by the Dominican Congress on May 22, and since ratified by the German Empire, regulates the validity of marriages by Germans in Santo Domingo, whether performed in accordance with Dominican or German laws and rites. It concedes to all commercial intercourse between Germany and Santo Domingo the clause of the most favored nation. German consuls are to have the privilege of settling the estates of deceased countrymen of theirs in the republic, and *vice versa*. In the event of Santo Domingo ever throwing open the coastwise trade to any other nation, the German flag is to enjoy the same privilege.



HENRY R. SELDEN.

SELDEN, HENRY ROGERS, an American jurist, born in Lyme, Conn., Oct. 14, 1805; died in Rochester, N. Y., Sept. 18, 1885. He came of a family that had settled in the colony of Connecticut as early as 1636, and had always been in good circumstances and high repute; so that, although he had little regular school training, he grew up in a home whose surroundings were in themselves a liberal education. He went to Rochester in 1825, and studied law in the office of Addison Gardiner and Samuel L. Selden, his elder brother, both of whom afterward became Judges of the Court of Appeals. He was admitted to the bar in 1830, and began the practice of law in the town of Clarkson, Monroe County, but removed to Rochester in 1859, having had an office in that city for some years previous to that date. Sept. 25, 1834, he married Laura Anne Baldwin. As early as 1845 he became interested in telegraphic enterprises, and was made President of the Atlantic Lake and Mississippi Valley Telegraph Company. He had also an interest in the New York and Mississippi Valley Printing Telegraph Company, based upon House's patents. He was appointed reporter of the Court of Appeals in 1851, and held the place until the expiration of his term in 1854, publishing six volumes of reports. He had in early life been a Democrat, but he was earnest in his opposition to the extension of slavery, and on that issue joined in the formation of the Republican party. In 1856 he became the candidate of the party for the lieutenant-governorship, and was elected, though compelled to be absent in Europe on professional business during the canvass. He served for the full term of two years. He attended the Republican National Convention at Chicago in 1860, and worked earnestly to secure the nomination of Seward for the presidency; but he acquiesced cheerfully in the nomination of Lincoln, though he was then considered the representative of a less advanced type of Republicanism than that which prevailed in the East. In July, 1862, Mr. Selden was appointed Judge of the Court of Appeals to fill the vacancy caused by the resignation of his brother; and he was afterward elected to the office for a full term, but resigned at the close of 1864. In the autumn of that year he was elected to the Assembly from the Rochester district. After traveling in Europe for his health, he returned in 1867 and resumed practice. In the election of 1870, held to choose a Court of Appeals, under the provisions of the new judiciary article of the Constitution, he became the Republican candidate for the chief judgeship, but was defeated. Indeed, he accepted the nomination with no expectation of success. In 1872 he attended the Cincinnati Convention that nominated Horace Greeley for the presidency, and, though dissatisfied with the result of its action, supported the candidate, and never afterward returned to the Republican organization. His explanation of his course was that he had been a Democrat in early life and became a Republican on the slavery issue, and therefore it was natural that he should revert to Democracy after the settlement of the slavery question. At the autumn election in Rochester in 1872, Susan B. Anthony and other women succeeded in getting their names put upon the registry lists and swearing in their votes. In the prosecution of Miss Anthony that rose out of this action Mr. Selden was her counsel, and, though the notoriety incident to such a case was disagreeable to him, he did what earnest sympathy and large learning could do for his client. He retired from the practice of law in 1879. Mr. Selden was one of the leading lawyers of the State, though never a man of much oratorical ability, and at one time hardly able to speak above a whisper on account of a throat affection. His strength lay in the keenness of his sense of justice, in his great legal learning, in the honesty of his purpose, and in the candor of his methods. He seemed to have a sympathetic and impulsive nature, disciplined into habits of reticence and self-restraint, but liable to break the barriers occasionally under the influence of strong feeling; so that when he gave expression to indignation in court the impression produced was striking, because, though the expression of feeling might be moderate, it was clear that it had to be powerful to find any expression at all. He was distinctively a conscientious and high-minded man; but his character was so marked by simplicity, sincerity, and lack of pretense, that he never seemed to know that he was in any way peculiar for conscientiousness and high-mindedness. He was singularly generous in his estimates of others, and open to the solicitations of those who were in trouble. Though often a candidate for public office, he was without political ambition and unversed in the arts of the politician.

SERVIA, a kingdom in eastern Europe. Complete independence was recognized in the Treaty of Berlin. The Constitution of 1869 reaffirmed succession in the family of Obrenovich, declared the responsibility of the ministers to the Assembly, and vested the legislative power in the Skuptschina, jointly with the sovereign. The Senate was transformed into a Council of State, charged with the elaboration of laws. The Skuptschina, which is elected for three years, consists of 178 members, of whom three fourths are elected by the people, every tax-payer having a vote, and one fourth are appointed by the King. A Great National Assembly, composed of four times the number of the ordinary, is elected to decide on constitutional questions.

The King, Milan I, is the fourth of the dynasty. He was born in August, 1854, and succeeded his cousin, Prince Michail, assassinated June 10, 1868. He was proclaimed King March 6, 1882. The Cabinet is composed of the following members: President of the Council, Minister of Foreign Affairs, and Minister of Finance, M. Garaschanin; Minister of the Interior, D. Marinkovich; Minister of Public Works, K. Protich; Minister of War, Col. Petrovich; Minister of Justice, G. Pavlovich; Minister of Public Instruction and Worship, E. Popovich; Minister of Agriculture and Commerce, D. Raiovich; Minister of Finance, V. Petrovich.

Area and Population.—The area of the kingdom is 48,582 square kilometres, or about 18,700 square miles. The population, according to the preliminary returns of the census of December, 1884, is 1,902,419, having increased from 1,667,159 in 1874. Belgrade, the capital, has 35,471 inhabitants; Nish, 16,178; Leskovitz, 10,807.

Finances.—The revenue is derived mainly from direct imposts, including a capitation-tax classified according to rank, occupation, and amount of income. In 1883–'84 the receipts of the treasury amounted to 37,365,000, and the expenditures to 37,291,159 dinars. The receipts are estimated, in the budget for 1884–'85, at 46,000,000 dinars; the expenditures at 44,236,562. The national debt amounted, in the beginning of 1885, to more than 200,000,000 dinars.

Commerce.—The largest part of the commerce is with Austria-Hungary. The total value of imports in 1884 was 51,087,148 dinars or francs, the value of exports 38,742,916 dinars. There were imports from the United States of the value of 2,376,000 dinars.

The Army.—After the war with Turkey in 1876, the Servian militia was transformed into a regular army. The reorganization was completed in 1876. It consists of a field army, depot troops, and a reserve army. A corps of gendarmerie, recruited by re-enlistment, was added in 1884. In time of peace the permanent army consists of 5 regiments of infantry, 6 squadrons of cavalry, 5 regiments of field artillery, 1 regiment of mountain artillery, and fortress artillery, pioneers, pontonniers, engineers, and train, mustering altogether 13,213 men of all ranks, with 132 guns. The war effective of the field army is composed as follows: Staff, 1,582; infantry, 45,240; cavalry, 3,696; artillery, 4,142, with 264 guns; engineers, 1,598; gendarmerie, 1,238; train, 2,000; sanitary troops, 500; total, 60,286 men of all ranks. The permanent cadres also supply of reserve troops, 15 battalions, 5 squadrons, 6 batteries, and 7 sections of engineers, with a total strength of 12,856 men of all ranks, with 34 guns. The reserve army, or Landwehr, comprising the men of the second ban, counts 60 battalions, 10 squadrons, 20 batteries, etc., with an effective of 58,415 men and 120 guns. Every able-bodied Servian is liable to serve from his twentieth to his thirtieth year in the first levy, then till his thirty-seventh year in the second levy, and from then till his fiftieth year in the third levy. All that are unfit for service pay a war-tax of one tenth of their annual taxes. The period of service with the colors is two years. The infantry are armed with the Mauser rifle, improved by Major Micovanovich, of 10·15 millimetres calibre. The De Bange gun has been adopted for the artillery, but it is at present armed with muzzle-loaders of home manufacture and Krupp guns taken from the Turks.

Railroads.—In 1884 the line of railroad from Belgrade to Nish, 153 miles, was open to traffic, and the continuation to Vranja, 56 miles, was under construction.

Internal Politics.—Servia was in a critical political condition when the Eastern crisis was precipitated by the revolution in Philippopolis. The weight of taxation caused general discontent among the agricultural population. The new military service was not willingly submitted to, and the financial burden that it entailed exceeded the tax-paying powers of the people. The construction of the railroad to connect with the Turkish lines, in accordance with the convention of the four powers, aggravated the financial crisis. The intimate relations with Austria, antagonistic to the political sympathies and traditions of the people, brought economical distress instead of the promised prosperity. The financial accounts for 1884–'85 showed a deficit of 3,500,000 dinars. The land of many peasants was sold in execution for arrears of taxes. The cruel severity with which the late disturbances had been suppressed, and with which the Government sought to root out seditious elements, multiplied the enemies of the King. The adherents of Peter Karageorgevich and the Panslavist committees made the most of the popular discontent and distress, and endeavored to precipitate a dynastic revolution. Proclamations were circulated. To further their designs, bands of brigands were organized in Usica and other parts of the country, recruited from dispossessed farmers, Montenegrins, and political malcontents, which were strong enough to defy the authorities.

The pro-Russian party in Servia, represented by the former Prime Minister, Ristics, resented the Austrian control, and sought to direct the national ambition to the acquisition of Bosnia and Herzegovina and of Dalmatia and other provinces in the Austrian dominions inhabited by Serbs.

There were dissensions in the Progressist party on financial and military questions in the spring, which occasioned a ministerial crisis and the abrupt adjournment of the Skuptschina on May 5. On the 15th of May the Cabinet was reconstituted by the admission of three new members.

Relations with Bulgaria.—The Servians have been exceedingly jealous of Bulgaria, fearing that the younger state would absorb Macedonia and shut off Servia from territorial extension, from the recovery of the "holy places" of Servian history, and from future access to the sea. The Government and the press encouraged the feeling of antipathy. When the Bulgarians harbored the banished Servian Radicals and raised the Timok boundary question in 1884, the new army was eager to give the Bulgarians a proof of Servian prowess and vindicate the national claims to supremacy in the Balkans. The soreness against Bulgaria was aggravated by the neglect of the principality to build its part of the railroad and give an outlet to the line constructed with sacrifices by the Servian Government. Another cause of animosity against Bulgaria was the restrictions imposed upon Servian commerce by Bulgarian tariff duties. Servia was excited in the spring over the Macedonian question. Bulgarians were busy preparing an agitation for the throwing off of Turkish rule. They were not of the party that overthrew Gavril Pasha and declared the union of the two Bulgarias, but were Russophile Bulgarians, who were instigated by the Slav committees. The movement was connected with the ferment that was stirred up in Servia about the same time. The northern part of Macedonia and adjacent districts, the territory lying between the borders of Bosnia and the Schar mountains, about 7,000 square miles in extent, is ethnographically and historically a part of Servia, and is known as Old Servia. In the center of Macedonia Bulgarians predominate, in the south Greeks, and in western districts Zinzars, or Wallachs.

After the revolution in Philippopolis took place and Prince Alexander accepted the *fait accompli* and headed the movement, the Servian Government was the first to demand the restoration of the *status quo*, and to raise the argument of the balance of power.

Diplomatic Position of Servia.—On Sept. 22 the

Servian Government notified the great powers that the Servian army was mobilizing for the purpose of restoring the *status quo* of the Berlin Treaty, or, in case the powers should decide to the contrary, of readjusting the equilibrium among the Balkan states. The Austrian Government assured King Milan that the Bulgarian union would not be sanctioned unless Servia received compensation. When the informal conference that met in Constantinople, Oct. 1, ended without a conclusive decision, Servia, with the approval of Austria, mobilized her whole army. On Oct. 13 the powers presented the collective note at Sofia and Constantinople (see BULGARIA). The invasion of Macedonia by the Servians was rendered impossible by the concentration on the frontier of a Turkish force sufficient to prevent the occupation of any portion of Old Servia. The Servians then determined to seize upon what they called eastern Servia as a pledge for the restoration of the *status quo* or an indemnity for Bulgarian aggrandizement. The coveted territory comprised the Danubian port of Widdin with its district and the district of Sofia, within which are the capital of the principality and the main route of intercommunication between northern and southern Bulgaria. The Servian claims to these districts were based upon the fact that they contain a considerable element Serbic in race though not in language.

The mobilization of the army was advanced as rapidly as possible, and a loan of 15,000,000 francs was contracted in Vienna. The Skuptschina was convened for an extra session on Oct. 1. It passed the measures submitted to it by the Government, and adjourned Oct. 4. The Servian army was mustered at Nish, and advanced troops were stationed at Zaitshar, Pirot, and Vranja. On Oct. 12 the Servian army began to advance in two columns, one in the direction of Leskowacz and the other toward Ak-Palanka. The Bulgarian troops were absent on the Roumelian frontier. Irregular forces were formed to defend the border. Arrangements for a loan of 25,000,000 francs, on the security of the tobacco *régie*, were concluded Oct. 13. The Austrian Government warned King Milan that any warlike action he might take would be entirely at his own risk. Russia was at that time seeking to arrange the basis for a conference of the powers, and had come to an understanding with Austria and Germany (see BULGARIA). In reply to the diplomatic intervention of the powers, King Milan issued a manifesto insisting that the unification of Bulgaria should not be recognized unless Servia received material compensation. On Oct. 20 the Prince of Bulgaria summoned the national militia to join the colors. The warnings of Austria and fresh remonstrances from the powers impelled the Servian Government to await the conference at Constantinople before resorting to warlike action. In the mean time the Bulgarian forces, recalled from Roumelia, were collected in the threatened districts and echeloned along the Servian frontier from Widdin to Kostendil. On Nov. 4 the Servian headquarters were transferred from Nish to Pirot. On Nov. 3 the second class of the reserves was called out. On Nov. 8 a band of Servian soldiers crossed the frontier near Trn, and attacked a Bulgarian outpost. A skirmish ensued, in which one of the Servians was killed. There had been frequent violations of the boundary before, through inadvertence or by parties in search of water. Servian outposts were now placed at points on Bulgarian territory, and Bulgarian pickets were attacked several times. At Tsaribrod the Schumadja division of the Servian army occupied the heights on the frontier line. To prevent the Bulgarian flotilla from ascending the Danube, fortifications were erected on the banks and armed with heavy guns. Although the Servian people, by nature and tradition inclined to military adventures, were convinced that action was necessary to preserve their national prestige, and although they were incensed against the Bulgarians, particularly on the railroad question, and on the ground of the customs duties that deprived eastern Servia of its former market, yet they sympathized with the Bulgarians in their desire for union, and were not satisfied with the cause in which they were to be led in war against a kindred people. The Servian troops in the field numbered 75 battalions of infantry, with 1,065 officers and 78,255 men; 25 squadrons of cavalry, with 191 officers and 4,758 men; 40 batteries of field-artillery, with 240 guns, 248 officers, and 6,820 men; and engineers, transport, and medical corps, bringing up the total to 107,436 men of all ranks, not including the mobilized Landwehr in the rear. Though officially warned that it would be at his own risk if he proceeded to military action, King Milan was abetted in his war preparations by the Hapsburg Government.

The Invasion of Bulgaria.—King Milan, convinced that the conference would break up without definite results, called his Cabinet together on Nov. 12 and decided, on their advice, to send an *ultimatum* to Bulgaria. On that day M. Garaschanin dispatched a circular complaining of the treatment of 300 Servians as brigands and of attacks upon Servian outposts, a repetition of which would be regarded as a *casus belli*. News then came of a skirmish on the frontier, in which the Bulgarians were reported to have attacked an outpost on Servian territory, near the village of Vlassina in the district of Vranja, and to have been repelled, leaving ten dead and wounded on the field. Orders were thereupon dispatched to the corps commanders to advance along the whole line. On Nov. 14 a proclamation was issued declaring war on the grounds of the violation of the Treaty of Berlin and the disturbance of the balance of power, the tariff war, the seizure of the frontier post of Bregova in 1884, the countenance and succor given to Servian rebels, the arrest of Servians by the Bulgarian authorities, and the massing of undisciplined volunteers on the border and their attacks on Servian troops and people. M. Garaschanin sent a circular to the foreign representatives, alleging the Bulgarian attack at Vlassina as the cause for crossing the frontier, and declaring there was no intention of prejudicing the sovereign rights of the Sultan.

After some desultory fighting, on the evening of Nov. 14, the Servians occupied the town of Tsaribrod, three miles over the frontier, at the entrance of the Dragoman Pass, where the Bulgarians were posted. The Bulgarian ministry, in a circular to the foreign representatives, denied that the troops had violated Servian territory and attacked the Servian post at Vlassina, and asserted that the aggression proceeded from the Servians, who made an attack upon a Bulgarian patrolling party at Rogitza. The Bulgarian troops were not sent to the frontier, it was said, until the Servian diversion against Bulgaria occurred, and were then posted at some distance from the frontier line and maintained themselves strictly on the defensive. The Bulgarian Minister of Foreign Affairs asked the Servian representative if he was aware of the invasion of Bulgarian territory on the morning of the 14th. The telegram from the Servian Premier, announcing that war was declared and that hostilities would begin at six o'clock in the morning, did not reach the hands of M. Zanoff until noon. Prince Alexander sent an appeal to the Porte for assistance, announcing that he had assumed the defense of the boundary of the Turkish Empire until a Turkish army should be sent into Bulgaria. The Porte answered that he had provoked Servia by breaking the Berlin Treaty, and as a contumacious vassal could not expect succor; but if he restored the *status quo*, his request would be taken into consideration. Troops were sent from Sofia and forwarded from Eastern Roumelia by forced marches; the prince went to the front to take command.

When the Servians crossed the frontier they encountered resistance at Bewskedol and captured the position, with a loss of eleven killed and twenty wounded. At Trn, Klissura, Tsaribrod, and on the road to Kostendil, there was sharp fighting. The King of Servia assumed the chief command.

The Bulgarian army before the Roumelian revolution was well prepared for war. The Russian officers had in seven years developed an admirably disciplined army; but their recall deprived it of the entire general staff, the Minister of War, the staff-officers, and four fifths of the captains. Only sub-lieutenants were left to command battalions, and lieutenants and a few young captains to command regiments and direct strategical movements. Major Gutcheff was the chief in command under the prince. Alexander formed a new ministry of war and a new general staff. Within two weeks after the declaration of the Bulgarian union, the army was on the Turkish frontier, ready for action, and a new army of militia and volunteers had sprung up. The defensive preparations on the Servian frontier were not begun in earnest until the invasion actually took place, and when the Servian declaration of war took the country by surprise, the regiments in Roumelia marched forty miles a day to reach the seat of war. The railroad was of slight assistance, because most of the locomotives were in Turkish territory at the time of the revolution.

Simultaneously with the movement upon Tsaribrod the Morava division of the Servian army, under Col. Topalovich, advanced upon Trn and occupied several villages and the heights before the town. At Tsaribrod one Bulgarian battalion holding the bridge over the Nishava sustained the attack of six Servian battalions supported by artillery and cavalry, until compelled to retire with a loss of thirty-four men. Col. Michtovich then occupied Tsaribrod with the Drina division. The King, who led 42,000 men into the Sofia district, transferred his headquarters to Tsaribrod.

The frontier was crossed in four places, the object of the movement being to turn the Dragoman Pass and capture Sofia by a *coup de main.* The King commanded the main army, while the Timok army corps, which entered the Widdin district, was commanded by Gen. Leschjanin. The Bulgarians there retired to strong positions, and unexpected resistance on the other wing defeated King Milan's plan. The Timok division under Col. Djunich carried the Bulgarian positions on the road to Kula, one after the other. On the 15th, Kula, otherwise called Adlie, ten miles beyond the frontier line, was captured after a severe engagement in which the Servians lost 50 killed and 200 wounded. During the two days 350 Bulgarians were taken prisoners. Gen. Leschjanin advanced with all his troops, and on the 16th encountered the main body of the Widdin division between Adlie and Widdin. The Bulgarians fell back upon Widdin in disorder, leaving many dead and wounded on the field, and 1,000 prisoners in the hands of the enemy. These victories were followed up until the Bulgarians were cleared from the country before Widdin, and their line of communication with Lom and Sofia cut off. Widdin was then regularly besieged.

On the 15th the Morava division attacked the Bulgarian intrenchments at Trn. The Bulgarians fought valiantly, and repelled two assaults; but the day was decided by the artillery-fire of the Servians, and on the following morning they held the last of the Bulgarian fortifications. Many prisoners were taken, entire battalions of Bulgarian irregulars laying down their arms. The Drina and Shumadja divisions operated against the Dragoman Pass. The Bulgarians, intrenched in the villages along the road, fought stubbornly, but were dislodged. After a desperate engagement, in which both sides sustained heavy losses, the Servians occupied positions at Raptcha, enabling them to turn the difficult rocky gorge of the Dragoman Pass. The pass was then evacuated. The Bulgarians concentrated at Slivnitza, half-way between Dragoman and Sofia. The advanced troops occupied positions in front of that place, while the Danube division established itself in the pass. The Shumadja division under Col. Benitsky advanced upon the right to Bresnik, carrying four redoubts and taking 400 prisoners. The capture of Bresnik gave the Servians command of a second road to Sofia. The troops of Col. Benitsky, the flower of the army, thus threatened either to descend upon the capital or to flank the Bulgarians at Slivnitza. Radomir was taken after a severe engagement. The Morava division made a wide *détour* southward as far as Kostendil, and then turned northward again until at Izvor it was in communication with the Shumadja division, which had its advanced guard at Radomir. King Milan's aim was to maintain his position in the center before Slivnitza until the other two divisions should effect a junction and fall upon the Bulgarian rear, or until they should capture Sofia.

On the 16th of November, before his departure for Slivnitza, Prince Alexander telegraphed to the Grand Vizier, declaring his entire submission to the Sultan, and saying that he had ordered the complete evacuation of Eastern Roumelia on the 14th. · He asked the aid of the imperial forces in repelling the invasion of his province. King Milan, flushed by his easy victories, began to enlarge his demands. He proposed to annex the Bulgarian area of the international railway route, so that Servia would be able to complete the junction with the Turkish line, and also the Widdin district, to enable Servia to construct a railway to the lower Danube to connect with the projected Roumanian line from Krajova to Kalafat. The area of the international railway route includes Sofia and its district and the territory beyond, as far as Tatar Basardjik in Eastern Roumelia. When he obtained possession of the Dragoman Pass and forced the Bulgarians to retreat upon Slivnitza, King Milan expected within two or three days to surround and overwhelm them there, and to seize their capital. Such might have been the result if a bold and successful assault upon the two divisions in front of Slivnitza, which formed the Servian center, just before the other two divisions effected a junction with the Drina and Danube divisions, had not suddenly changed the whole face of the war. The original plan of the campaign was to remain in the positions before Slivnitza until General Leschjanin had come round by the Genci Pass and Col. Topanovich by way of Bresnik to cut off the retreat of Prince Alexander's forces to Sofia.

On the 17th, while the Servian troops between Slivnitza and Dragoman were resting, the Bulgarians, at ten o'clock in the morning, under cover of a fog, attacked the position on the Servian left held by the Danube division, commanded by Col. Mihilinovich. The sentry service of the Servians was so neglected, that the enemy completely surprised them and came close to the positions of the left wing. The Servians were the better armed, and received the Bulgarians with sharp fusillades at long range, frequently changing their ground; but the fog enabled the Bulgarians to charge with the bayonet into the Servian ranks. The Danube division, subjected to heavy artillery-fire and flanking infantry attacks, was unable to hold its ground until the cavalry force of Praporcetovich could come up to check the Bulgarian onset and permit the infantry columns to develop their line of battle. The Servians were disconcerted by the hand-to-hand conflict with the stout Bulgars, and suffered heavy losses in their confusion. Yet the Servians, who were much stronger than the attacking detachment, rallied and drove the Bulgarians back to their intrenchments at Slavonji; but in the afternoon they were re-enforced by the Danube regiment and regained the lost ground, and slowly forced the Servians back in a stubborn combat that lasted till evening. The Servians advanced against the Bulgarian center in extended infantry lines, after placing their artillery in position. A hot artillery and infantry fire was opened on both sides. The main position of the Bulgarians, which the Servians attempted to storm, rendered over-confident by their earlier successes, was one of great strength. The Bulgarians had Krupp guns, whereas most of the Servian guns were inferior, and few of the shells reached the Bulgarian lines. The Bulgarians had excellent fortifications, and suffered but little damage, while inflicting heavy losses on the Servians, who kept up the attack with great fortitude. The Servian Krupp guns were silenced as soon as they were brought into position. The right wing advanced, and the fight became general, but it was impossible to storm the Bulgarian position, as at no point could a breach be made in the line. About five o'clock the Servians began to draw back, although the firing continued for two hours longer. Bulgarian re-enforcements arrived during the day, and entered the battle after long marches. Prince Alexander directed all the dispositions of his troops. In the evening the Bulgarians advanced about three miles and dislodged the Servians from their nearest positions.

At half-past seven o'clock in the morning of the 18th, the Servians renewed the attack vigorously on their right, where the Bulgarian line was weakest, and executed a feint against the center to prevent the re-enforcement of the left wing. Fresh troops had arrived during the night. A force of 4,000 men was quickly sent to the threatened point, and the attempt to double up the Bulgarian flank ended in a hasty retreat of the Servians, leaving dead and wounded on the field. At noon light detachments were marched out against the Bulgarian central position. The Servian soldiers advanced intrepidly, under a murderous artillery-fire. Every grenade burst in their ranks, until they retired in good order with thinned numbers. Toward evening Prince Alexander ordered an assault upon a hill on the right, to prevent the enemy from posting batteries there. The Servians were driven out of the position with a bayonet-charge. Before the 18th of November there was no adequate force to withstand the Servian advance; Maj. Gutcheff had only eight drushinas to defend the extended line at Slivnitza. The 8,000 soldiers were obliged to remain in the rifle-pits day and night in cold and stormy weather. Re-enforcements now came in rapidly, but they were exhausted by their forced marches. One regiment made sixty miles in thirty-two hours, and lost only sixty-two stragglers out of 4,500 men. Another, unable to march on foot beyond Sofia, was forwarded to the front riding double on cavalry-horses. The Bulgarian commander invited attack upon his strong front position, in the hope of delaying a flank attack until re-enforcements arrived. General Jovanovich, the Servian commander, knowing the numerical weakness of his foes, threw his troops against the Bulgarian front, and let them be mowed down by a triple and quadruple fire from the trenches and batteries, until the two divisions were so reduced and broken that they were only fit to be placed in the reserves. When he undertook an attack on the previously defenseless left flank of the Bulgarians, it was vigorously resisted by the newly arrived re-enforcements. The haste of the Servian commander was in great measure due to the condition of his soldiers. The commissariat was unable to supply them with sufficient food, as transportation was difficult over the mountain-roads. The Bulgarians had plenty of food in their camp. A part of the Servian Landwehr was mobilized with the regular army. A cavalry force was equipped for active service, but it was found necessary to obtain stronger horses from abroad.

On the 18th Gen. Jovanovich moved a large body of troops to the south, in order to attack the Bulgarian position on its weakest side, and on the morning of the 19th began the battle with an attack on the Bulgarian right, which was repelled. The Bulgarians then assumed the offensive. The right wing followed up the advantage it had won, and assailed the Servian positions, carrying one hill after another at the point of the bayonet. The front of the Bulgarian fortified camp extended five or six miles. In the center were three hills, with lower hills on each side. A plain separated them from the Servian positions. Opposite the left wing and the center the Servians were intrenched on heights in front of the Dragoman Pass, three miles distant. The Bulgarian center advanced against the elevated positions opposite, supporting the attack of the right wing. Opposite the right wing, at a distance of three miles, was the position captured on the evening of the 18th, a plateau commanding the Bulgarian position. While driven out of their intrenchments before Slivnitza, and forced to fall back upon the heights at the entrance of the pass, the Servians delivered their attack on the left flank, which they opened with a heavy fire of artillery and musketry. Prince Alexander had prepared anxiously to resist this manœuvre, and the Bulgarian artillery, supported by the prince's regiment of infantry, repelled the attack. The Shumadia division came up from Trn in the afternoon, and endeavored to regain the heights on the left commanding the road, but the Bulgarians had already turned the Servian position, and held their ground. The Morava division hastened on from Bresnik, but arrived too late and too much wearied by a severe march through the mountains to save the day. The Morava and Shumadia divisions were unable to accomplish their plan of falling upon Sofia and Slivnitza from the south, because they passed through an exceedingly difficult country in bad weather, and had great trouble in finding food. A part of the Drina division, sent to the north to execute a flank movement, was in like manner lost and useless to affect the issue of the main action. The Bulgarians captured twelve guns from the Danube division. Not only the Bulgarian troops that were recalled from Eastern Roumelia, but the Roumelian militia, were now in the field. The Servian losses on the 17th alone were reported as 500 killed and wounded, but unofficial accounts made them three times as many. The Bulgarians lost 400 men. On the 20th, a Bulgarian detachment reconnoitred in the direction of Bresnik, and, finding the place occupied by a small force, recaptured it. On the 21st, Prince Alexander took up positions that compelled the Servians to abandon the road and withdraw to the positions on the heights, fronting to the north. On the 22d the Eastern Roumelian militia, under the command of Lieut.-Col. Nicolaieff, advanced along the road to attack the Servian positions. The Servians, fearing that their retreat through the narrow defile would be cut off, retired as rapidly as possible to Pirot. The Bulgarian prince did not venture to attack them sooner, or to advance with the main body of his forces, because he was not certain that another attack would not be made on his left flank. The Servians, demoralized by their defeat, were easily dislodged from the steep heights (which were less defensible than a gentle slope would be, because they afforded to the storming party many sheltered spots), and retreated without awaiting the bayonet-charges. The Morava and Shumadia divisions retired simultaneously with the main body in order to avoid a catastrophe. The Servian losses, in the battles from the 17th to the 21st of November, were estimated at 6,000 in killed and wounded. The Bulgarian loss was much lighter, owing to the strength of their position, and because the Servian fire was mostly at long range. After the failure of the Servian attack on Slivnitza, Gen. Jovanovich was tried by court-martial and dismissed from his command, for disobeying orders in attempting to storm the Bulgarian position instead of remaining on the defensive in his intrenched position on the heights. He afterward committed suicide. Gen. Meskovich was censured for neglect of duty in not delivering the flank attack on Slivnitza in time. Gen. Horvatovich, who was the diplomatic representative of Servia at St. Petersburg, was called home to take command of the army. Col. Transovich was appointed Minister of War. The retreating Servian forces attempted to make a stand on the Trn and Tsaribrod line. On the 23d, Dragoman, Bresnik, Pernik, and Izvor were again in the hands of the Bulgarians. On the 22d Prince Alexander received a telegram from the Grand Vizier, proposing an armistice, and saying that Servia had agreed. He replied that he had not begun the war, and that his military honor would not allow him to agree to a truce as long as a Servian remained on Bulgarian soil.

The united four divisions of the Servian army took up a strong position along the frontier, four miles beyond Tsaribrod, and the headquarters were withdrawn to Nish. The bridge over the Nishava was burned by the Servians. On the 23d Prince Alexander reoccupied Tsaribrod. There was firing at various points along the Servian line of retreat, and a severe fight on the right wing of the Bulgarians, near Tsaribrod, in which the Bulgarians captured several standards and guns, and broke the Servian ranks with bayonet-charges. Prince Alexander ordered an assault upon a height commanding the vicinity of Tsaribrod, occupied by the Shumadia division. While one battalion of the Varna regiment approached on the flank and engaged the attention of the Servians, three other battalions passed around at the rear and ascended the hill, firing volleys and supported by a battery. When half-way up they charged with the bayonet and forced the Servians to retreat in confusion. The Bulgarians lost 120 men and captured 50 prisoners.

On the afternoon of the 24th the Servians attacked the Bulgarian center, but were repelled, and retreated across the frontier. The troops in Trn were simultaneously moved into Servian territory.

At Pirot the Servian reserves joined the army, raising its strength to over 50,000 men. From Tsaribrod the Bulgarian army advanced upon Pirot and met with no resistance until within three miles of the town. Supposing they were ahead of the Servians in reaching the place, the Bulgarians approached on the afternoon of the 26th, in marching order. Suddenly a powerful field-battery, posted beyond the town on the left, unmasked, and poured a hail of shells into the Bulgarian center, where Prince Alexander and his staff, and the Minister of War, Zanoff, rode at the head of the column. A hot fire of shrapnel and rifle-volleys was opened at the same instant from a commanding position on the left flank. The center fell back, and Prince Alexander sent orders along the line not to attempt to take the town, nor to be drawn into a general engagement before the morrow. Maj. Gutcheff, with a large body of troops, had gone before on the Knaievatch road with the design of cutting off the line of retreat. When he found the enemy in force at Pirot, the Bulgarian prince formed the plan of first clearing the heights on the left, and then breaking through the Servian center with the central column under Col. Nikolaieff, and driving one part back upon Nish, and the other along the road toward Knaievatch into the arms of Maj. Gutcheff's column. In the morning the heights were found to be in the possession of Capt. Popoff, who, hearing the cannonade, had come up from Trn in the night and driven the Servians out of the position at the point of the bayonet. The Servians were driven out of Pirot in the evening of the 26th. In the morning the Servian left assumed the offensive and recaptured the town, but evacuated it again in two hours. The Bulgarian manœuvres were successfully carried out according to the plan. Pirot was captured, and the heights behind it were carried by irresistible bayonet-charges. The right wing of the Servians retreated to Nish, and the left was finally driven into the Knaievatch road. Maj. Gutcheff, however, was not there to intercept them—the march through the mountains had taken longer than was expected, and he had been delayed by an encounter with a detachment of the enemy. The battle of Pirot lasted twenty-four hours.

The Bulgarian losses during the entire war were reported as 2,300 men killed and wounded, and 500 taken prisoners. The number of Servian prisoners in the hands of the Bulgarians at the close of hostilities was 1,100.

After the retreat of the Bulgarians from all their positions in the Widdin district into the fortress, the panic was such that the place was in danger of falling into the hands of the Servians without a struggle; but the Bulgarian troops, who were undisciplined volunteers, soon recovered their spirit, and were able to withstand the siege and force the lines to open communications. Several engagements were fought with Gen. Leshjanin's troops, in which both sides lost heavily. After the disasters of Slivnitza and Dragoman a large part of Gen. Leshjanin's force was withdrawn from the district, and a continual bombardment of the town was kept up to conceal the movement.

When the Porte issued a proclamation in Eastern Roumelia calling upon the people to return to their allegiance, and sent two deputy commissioners to Philippopolis, the Eastern Roumelian soldiers with Prince Alexander declared that, after they had poured out their blood in the defense of Bulgaria, they would never consent to be handed back to Turkey. The prince answered that he had not withdrawn his forces from the Roumelian border to meet the Servian invasion in token of a renunciation of the union. In declaring his submission to the Sultan, and notifying the Porte of the retirement of the Bulgarian troops from Roumelia, he had not renounced the union.

On the 25th King Milan sent a proposal for an armistice, and on the 27th repeated the proposal. Prince Alexander again refused to treat until he was on Servian territory, and announced as his terms the evacuation of the Widdin district and the payment of a war indemnity. When the Bulgarians entered Servia, the Austrian Government, which had been massing troops on the Bosnian frontier, announced, on Nov. 28, the intention of occupying Servia, and informed Prince Alexander that if he advanced farther he would be opposed by the Austro-Hungarian army. The powers sent collective notes to the Bulgarian and Servian Governments, announcing that they had agreed to the proposal of the Cabinet of St. Petersburg to combine with a view of stopping, by collective action, the hostilities and bloodshed between the Servians and the Bulgarians, and of putting an end to the struggle. On Nov. 28 Minister Zanoff, in a circular to the powers, announced the willingness of the Bulgarian Government, in view of the request of the powers and the declaration of the Austro-Hungarian Cabinet, to cease hostilities and enter into negotiations respecting an armistice. The Servian Government made the same promise. When, on the following day, the Servians renewed their attack on Widdin, Prince Alexander informed Count Khevenhüller, the Austrian envoy and intermediary of peace negotiations, that he considered himself released from his word unless the Servians ceased hostilities. Skirmishes continued, especially in the Widdin district, and the Bulgarians declared that they would accept no truce of which the evacuation of the district was not a condition. War preparations were continued on both sides. Finally, the powers again intervened, and directed the military *attachés* of their ministers at Vienna to proceed to the seat of war and demarkate the line between the districts occupied by the two armies, so as to put an end to such collisions. The Servian proposals for an armistice until Jan. 13, 1886, were, that the positions of Nov. 28 should be maintained, without liberty of moving troops from one point to another, and that a reciprocal evacuation should take place, if possible. These terms, presented in writing on Dec. 6, were rejected for the second time by the Bulgarian ministry. The Porte informed the belligerents that no definite peace could be concluded by Bulgaria without its intervention. The Sultan, on Dec. 6, ordered Prince Alexander to prolong the suspension of hostilities. Prince Alexander demanded, as a condition of the armistice, that the Servian force should evacuate the Widdin district without a simultaneous evacuation of Pirot. The Sultan sent Madjid Pasha as his commissioner to act with Prince Alexander in settling terms of peace. Servia and Bulgaria were unable to agree upon the terms of the armistice, but both belligerents promised to respect the injunction of the powers and remain on the defensive within their own lines. The International Military Commission, charged with determining the lines of occupation between the combatants, arrived on the spot in the middle of December. They agreed to base their decisions on the fact that, while the Servians could reckon some military successes in the north, and advanced twenty miles into Bulgarian territory, whereas at Pirot the Bulgarians were only ten miles beyond their own border; yet the Bulgarians were victorious in the main actions, which took place in the south, and were to be regarded as having conquered and obtained the strongest military position. The commissioners were intrusted with the duty of deciding upon the terms of the armistice. Prince Alexander agreed to accept their arbitration, subject to the approval of the Sultan. King Milan agreed to abide by the decisions of the commission. On Dec. 21 the commissioners signed a protocol embodying their decisions. They provided that the Servians should evacuate Bulgarian territory by Dec. 25, that the Bulgarians should evacuate Pirot by Dec. 27, and that the armistice should continue until March 1. In a letter to the Sultan, Prince Alexander pointed out that the evacuation of Pirot would leave Bulgaria without an indemnity for the sacrifices of the war.

The armistice was ratified by both belligerents, and on the dates set the troops retired within the political frontiers. On Dec. 26 Prince Alexander celebrated his triumphal entry into Sofia.

SILLIMAN, BENJAMIN, an American chemist, born in New Haven, Conn., Dec. 4, 1816; died there, June 14, 1885. He was the son of Benjamin Silliman, Sr., the first Professor of Chemistry at Yale College (1802–1853). The younger Silliman was graduated at Yale College in 1837, became assistant to his father, and lectured in the departments of chemistry, mineralogy, and geology. In 1842 he fitted up at his own expense an apartment in the old laboratory of Yale College, where he received private pupils in chemistry and mineralogy, and also conducted his original investigations in science. This was the first effort made in the United States to give advanced instruction in chemistry and physics. In 1846 the corporation of the college was induced to consider the advisability of organizing a new department for the teaching of the newer sciences. Mr. Silliman was elected Professor of Chemistry applied to the Arts, and Mr. Norton Professor of Agricultural Chemistry. In the following year, a committee appointed to consider advanced instruc-

BENJAMIN SILLIMAN.

tion recommended the establishment of a fourth department, and in 1847 the Yale Scientific School opened its laboratories for the reception of students. The cost of fitting up and furnishing the laboratories, apparatus, libraries, and cabinets necessary for conducting the work came from the private resources of Profs. Silliman and Norton, and they were also compelled to pay rental to the college for the building. This is now the well-known Scientific School of New Haven which since 1860 has borne the prefix of Sheffield, in recognition of the endowment of Mr. Joseph E. Sheffield. For five years (1849–'54) Prof. Silliman filled the chair of Medical Chemistry and Toxicology in the medical department of Louisville (Ky.) University. In 1854 he resigned this post, and was elected to succeed his father as Professor of General and Applied Chemistry in both the academical and medical departments of Yale College. He resigned the former in 1870, but continued his lectures at the Medical College. Prof. Silliman's literary activity was very great, and extended over nearly half a century. In 1838 he became associate editor of the "American Journal of Science and Arts," better known as "Silliman's Journal." In 1846 the active management of this periodical passed into the hands of the elder Dana, but Prof. Silliman continued as one of its editors until his death. His scientific papers, beginning in 1841 with an article on "Electrography, or the Electrotype," include fully a hundred titles, a complete list of which, up to 1874, is given in his "American Contributions to Chemistry." His "First Principles of Chemistry" appeared originally in 1847; subsequently it was revised (1850, and again in 1853), and had a sale in all of over 50,000 copies. In 1858 he published "First Principles of Natural Philosophy," which likewise passed through several editions. At the World's Fair, held in New York during 1853, the chemical, mineralogical, and geological departments were under his supervision. In connection with Charles G. Goodrich ("Peter Parley") he edited the "World of Science, Art, and Industry," and in 1854 "The Progress of Science and Mechanism," in which the chief results of the great exhibition were recorded. During the winter of 1845–'46, on the invitation of the leading professional and commercial men of New Orleans, he delivered what is believed to have been the first series of lectures on agricultural chemistry ver given in theis country. In 1869 Prof. Silliman became one of the State Chemists of Connecticut, and in that capacity he was frequently employed as a scientific witness in the courts. He was often retained in prominent cases throughout the country, where a knowledge of scientific principles was involved. He served as a member, at the request of the Government, on several important commissions where scientific advice was necessary. In 1863 the act of Congress incorporating the National Academy of Sciences named him as one of the original members, and his name will be found on many of the valuable reports of this academy. He was a member of numerous scientific societies in this country and abroad. From 1845–'49 he was a member of the Common Council of New Haven, and he was also one of the trustees of the Peabody Museum of Natural History there.

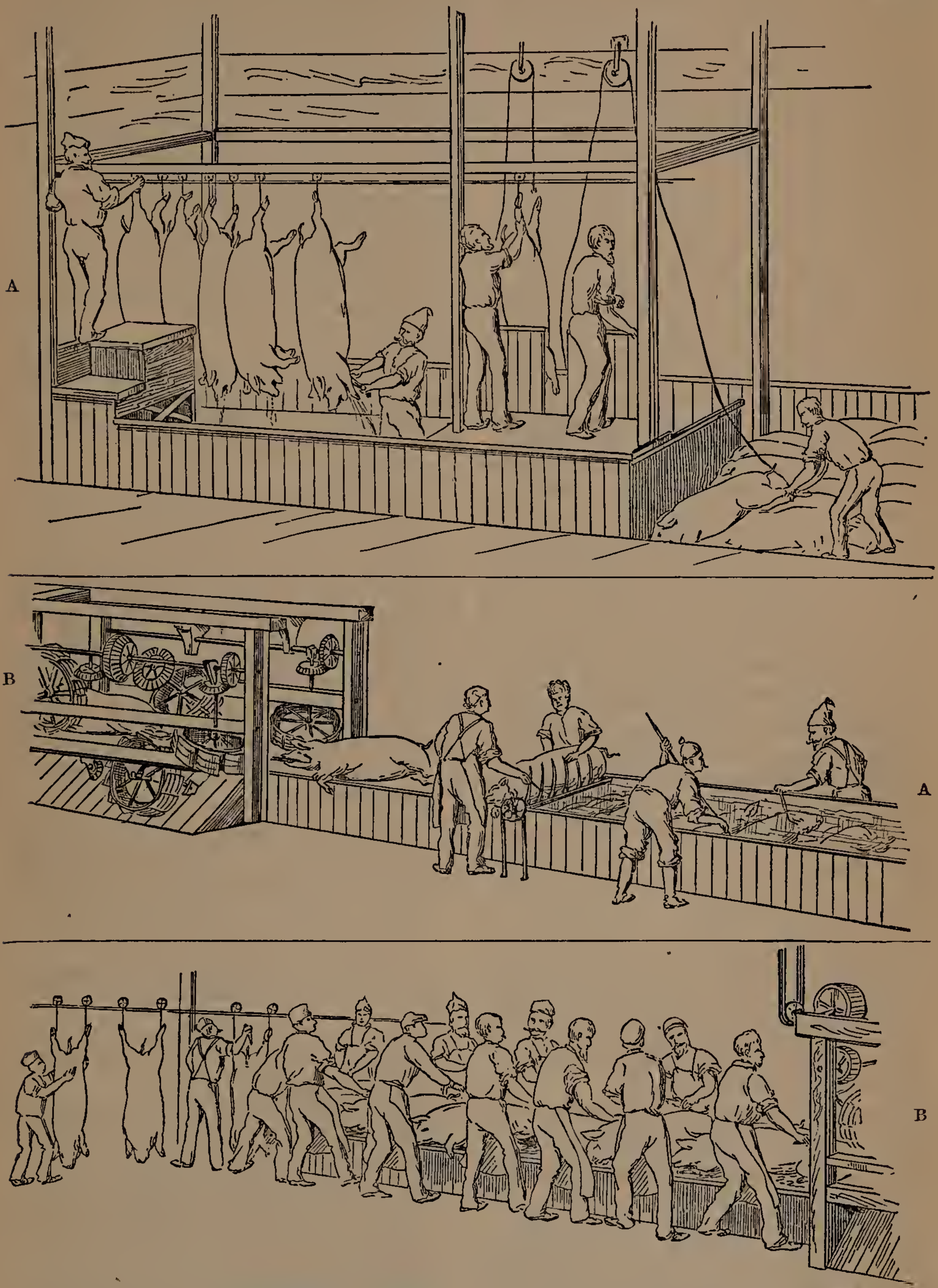
SLAUGHTERING BY MACHINERY. The first application of machinery to the slaughtering of food-animals consisted in the use of an apparatus for hoisting hogs by steam-power working loop-chains attached to the hind legs of the animals. This apparatus was first used about the year 1864, on a patent issued to John Martin. The application of steam-power to the hoisting of the animals before killing was first made in Milwaukee, and was merely an improvement upon various hand-levers long in use for the same purpose. Slaughtering by machinery proper began with the introduction of the automatic hog-scraper in 1878. As early as 1873, R. Fyfe, of New York, secured a patent on a "rotary hog-scraper," and, in the same year, Messrs. Neil & Dalton, of Jersey City, were granted a patent for an "apparatus for scraping hogs." Other patents for similar devices were issued to half a dozen inventors, but not until 1878 was mechanical scraping successfully accomplished. The machine invented by John Bouchard and Michael Cudahy, of Chicago, and patented by the former in December, 1880, was then adopted in several of the large abattoirs in Chicago, Milwaukee, and Kansas City. The use of machinery in slaughtering is confined almost altogether to hog-abattoirs, though beeves, after being shot in the brain, or stunned by hammer-blows upon the forehead, are lifted by steam-power appliances to the hanging position, in which their throats are cut and entrails removed. At the head of a hog-slaughtering gangway are several small pens, in one or more of which workmen are busy affixing loop-chains to the hind legs of the animals. An attendant pulls a lever, and the hog is quickly lifted clear of the pen and carried, head downward, upon a hanging-rail to the killing-pen. Here stands the sticker, covered with blood and knife in hand. As the hogs slide slowly past him, he seizes each one by a fore leg, pulls the throat toward him, and quickly pierces the heart with his knife, taking care to make an opening in the breast and neck large enough to permit a free and rapid flow of the blood. In two minutes the sliding carcass has reached the end of the sticking-pen, where life is supposed to be extinct, though it sometimes happens that this is not the case. Here a workman removes the chain from the leg and places it over a wire, on which it slides back to the catching-pen. The carcass then drops into the scalding-vat, which is eight feet wide and thirty feet long, and filled with water kept at boiling temperature by a constant injection of steam. Two workmen float the carcass through the tub and upon a large iron cradle operated by steam-power, which lifts the carcass from the vat and throws it upon a table. An iron hook is here inserted in the jaw and affixed to one of the links of an endless chain, which drags the steaming carcass, head first, into the scraping-machine. This (Bouchard's) consists of a series of wheels whose peripheries are protruding, elastic steel blades, each sixteen inches long and four wide, and set in triplets. The ends of the blades are turned sharply inward the sixteenth of an inch, forming rims of the sharpness of the bent edge of a sheet of zinc. There are nine of these bladed wheels, all revolving in a direction the reverse of that in which the carcass is drawn through the machine. One end of the shaft of each wheel is set in a mitred or movable bearing, and balanced with hanging weights, so that the scraping blades are not only brought to bear upon all portions of the hide of the carcass, but are automatically adjusted to animals of varying sizes. The hogs are all drawn through the machine in the same position, and each of the nine scraper-wheels is designed to remove the hair from a certain portion of the surface. An average of four fifths of the hide of each carcass is scraped clean. The hide is not bruised or marked, and is left cleaner and whiter, and of more uniform color, than by hand-scraping.

From the scraping-machine the carcass passes into the care of a gang of hand-scrapers, who carefully remove the remaining hair; each workman has a certain portion assigned him for his attention, and, as soon as he has performed his share of the work, he passes the carcass to his neighbor. In less than a minute the end of the bench is reached, where, with three strokes of his knife, one workman nearly severs the head, while another affixes the gambrel and pulls a lever, which lifts the carcass and suspends it from the overhead track, down whose incline it slides to the gutting and cleaning room. Each slaughter-gang consists of 120 men, working between the catching-pens and the hanging or chill room, in which the carcasses are left hanging overnight, in order that all animal heat may have disappeared from the meat before it is sent to the packing department. In one slaughter-house, that of Armour & Co., there are three of these killing-gangs for hogs alone, and in the busiest season from 8,000 to 12,000 hogs are killed and packed every day. Each pig-sticker kills nearly 500 animals an hour; and the gang of 120 men can slaughter, scrape, and dress 4,000 hogs in ten hours, with the assistance of this labor-saving machinery; whereas, by the old methods, the same number of men could kill and clean but 1,600 hogs.

Similar appliances are used in all the large abattoirs of the West. Some of the hog-scraping machines consist of a series of rollers over which the carcasses are passed, workmen holding them in the required positions. Another is an upright cylinder containing a series of revolving knives, between which the carcass passes, emerging at the top of the cylinders. The Bouchard apparatus is the most successful, chiefly in its quality of automatic adaptability to animals of all sizes and varying shapes. Devices have also been patented for gutting, cleaning, quartering, and cutting up hog-carcasses, but none has come into use.

There are in Chicago thirty-one pork-packing and six beef-packing firms, with estimated capital invested of $15,000,000. During 1885 they slaughtered 5,148,160 hogs, 1,588,874 cattle, and 739,578 sheep, valued as follows: hogs,

$68,983,344; cattle, $67,650,382; sheep, $3,500,000. The value of all the products (meats, lard, oils, glue, fertilizers, etc.) has been estimated at $184,000,000. Twenty-two thousand men are employed during the busiest or winter season. Forty-five per cent. of Western pork-packing is done in Chicago, and 90 per cent. of Western hog-slaughtering is performed with the assistance of machinery. The receipts of live animals at the Union Stock-Yards (where all the Chicago abattoirs are located) in 1885 were:



The three sections of the illustration are supposed to be in line, the jointures being made at A A and B B.

ANIMALS.	No. received.	Pounds.	Value.
Cattle..........	1,963,408	1,920,820,000	$81,105,000
Hogs..........	6,937,104	1,660,600,000	92,224,000
Sheep..........	1,003,000	8,049,000	4,200,000

These animals were shipped in 226,000 cars, an average of 20 trains, of 30 cars each, every day in the year. Pork-packing in the West has increased 400 per cent. since 1865. During twenty years, 113,337,000 animals have arrived at the Union Stock-Yards, valued at $2,253,000,000.

Of late the dressed-meat refrigerator-trade has made rapid progress. It was originally confined to beef, but now includes hogs and sheep, all of which are shipped in refrigerator-cars to Eastern cities. One firm, which started in the business in an experimental way about nine years ago, now has 100 meat-markets scattered along the Eastern seaboard, which are kept supplied with fresh Chicago-killed beef, pork, and mutton. There were slaughtered during 1885, for this refrigerator-trade, 1,260,000 cattle, 201,000 hogs, and 333,000 sheep. The export of dressed and canned meats is growing rapidly. One Chicago firm owns a line of 800 refrigerator-cars, which are constantly in use carrying dressed meat to New York. The same firm has filled canned-meat orders for the English and French Governments aggregating 20,000,000 pounds. The largest slaughter-house in Chicago, in 1885, killed 1,000,000 hogs and 300,000 cattle, employing 4,000 men in summer and 5,000 in winter, and selling food-products to the value of $48,000,000. The slaughter-house covers 24 acres of ground, with 65 acres of floor-space, and 15 acres in the chill and cold storage rooms.

SOUTH CAROLINA. **State Government.**—The following were the State officers during the year: Governor, Hugh S. Thompson, Democrat; Lieutenant-Governor, John C. Sheppard; Secretary of State, James N. Lipscomb; Attorney-General, Charles R. Miles; Treasurer, John P. Richardson; Comptroller-General, William E. Stoney; Superintendent of Education, Asbury Coward; Adjutant and Inspector General, A. M. Manigault; Commissioner of Agriculture, A. P. Butler; Railroad Commissioners, W. L. Bonham, E. P. Jewey, and D. P. Duncan. Supreme Court: Chief-Justice, W. D. Simpson; Associate Justices, Henry McIver and Samuel McGowan.

Legislative Session.—The Legislature met on Nov. 24, and adjourned on Dec. 24. The House contained 119 Democrats and 5 Republicans; the Senate, 32 Democrats and 3 Republicans.

There were 8 colored men in the House and 3 in the Senate. Over 250 acts and joint resolutions were passed. Of the whole number about 54 are public measures.

The measures of importance are not numerous. Among them are the following:

To prevent and punish the adulteration of food and drink.

To prevent the publication and circulation of obscene literature, including indecent show-bills and posters.

Repealing the act of 1880 requiring that convicts hired from the Penitentiary shall be under charge of a sworn officer, etc. This law is repealed in order to facilitate the hiring out of convicts, but it is provided that, in cases of cruelty, the person injured shall be a competent witness against the offenders.

Two joint resolutions looking to the amendment of the Constitution were passed. One of these, if adopted by the people and ratified, will allow the Legislature to take the United States census as the basis for the apportionment of representation in the Legislature. The other modifies the provisions relating to the issue of bonds by the State.

The act that exempted from taxation for ten years the capital invested in manufactures of cotton, wool, paper, etc., is repealed.

Giving land-owners an absolute first lien for rent. After them comes the laborer, with his lien on the crop, and after the land-owner and the laborer the merchant.

The House passed a census bill, but the Senate rejected it. The Oconee prohibitory law was repealed. In addition to this, the State authorized the unlicensed sale of domestic wines, of home manufacture, everywhere in the State.

Three acts were passed providing for the incorporation of railroad companies, of towns of small population, and of banks and manufacturing companies.

Finances.—The aggregate debt is practically the same as reported last year, $6,522,188.54, no bonds having been purchased by the sinking-fund commission on account of the high premium they commanded. Only $25,300 of old bonds were funded during the year, although the amount outstanding is estimated at over $400,000; and of $963,372 of Green consols, only $29,081.38 ($6,279.38 of which amount was invalid) have been exchanged for Brown consols.

The total revenue of the State and counties for the fiscal year beginning Nov. 1, 1883, was about $2,089,000, of which about $1,936,000 was raised by taxation, and $153,000 from phosphate royalty. Nearly 98 per cent. of the assessed State tax was collected, and nearly 96 per cent. paid into the treasury. The net receipt for each mill levied was $145,000, being an increase of $4,000 over the preceding year.

There are now 2,407,254 acres of land in the State not reported for taxation, and 912,870 acres on the forfeited list.

It is estimated that it will require $403,000 to meet the ordinary expenses of the government for the fiscal year 1885-'86, and $391,000 to pay the interest on the public debt.

All of the phosphate royalty for the year ending Sept. 30, 1885, amounting to $176,244.41, was collected. This is the largest amount ever paid into the treasury from this source for one year.

Education.—The number of pupils enrolled in the public schools during the last scholastic year was 178,023, of whom 78,458 were white and 99,565 were colored; the average attendance was 122,093. The number of teachers employed was 3,773, an increase of 89 over the preceding year; and the number of schools was 3,562, an increase of 80 over 1883-'84. The amount of funds available for school purposes during the year 1883-'84, the latest period for which reports are attainable, was $515,580.38.

The Institution for the Education of the Deaf and Dumb and Blind had an enrollment during the year of 85 pupils, a considerable increase.

Claflin College was founded in 1869, and is designed for the higher education of colored youth of both sexes. The total enrollment for the year was 405. There are five distinct courses of study, eleven teachers, and four superintendents of industrial departments.

The Military Academy has four classes, the full number provided for in the course of instruction, and during the coming year it will send forth its first class of graduates.

The number of matriculates of South Carolina College reported to the end of November (206) was larger than the total enrollment during the entire period of any preceding session since its reorganization. The increase in the number of post-graduate students in the college is still more significant. Sixteen graduates of this and other colleges are pursuing post-graduate courses.

The Penitentiary.—The number of convicts in confinement during the year was 1,453. The number on Oct. 31 was 945, a decrease of 11. Of this number 826 were colored males, 39 colored females, 75 white males and 5 white females. The cash receipts for the fiscal year were $65,532.16. To this amount must be added $10,917.64 due by contractors, making $76,449.80 as the total income for the year. The disbursements to Oct. 31 were $67,631.55. To this sum should be added $5,000 due in bank, making the disbursements for the year $72,631.55. The work on the north wing of the main building has been pressed vigorously, and it will soon be completed. There will then be 500 cells.

The Lunatic Asylum.—At the beginning of the last fiscal year there were 628 patients in the institution and 15 absent on trial. During the year 216 were admitted, making the whole number under treatment 859.

Manufactures.—In 1880 there were in the State 2,078 manufacturing establishments, having a capital of $11,205,894, employing 22,128 hands; and the value of the products of these establishments was $16,738,008. At the close of 1885, the number of establishments (including phosphate-mines) in the State was 3,256, having a capital of $23,367,510, and the value of their products was estimated at $38,403,257.

Agriculture.—In 1877 the area in cultivation in the principal crops was 2,383,780 acres, and the value of the productions was $28,186,080. In 1885 the area was 3,707,532 acres and the value of the productions was $41,031,195. The total value of these crops in 1885 was as follows:

Corn	$11,937,576	Irish potatoes	$434,949
Wheat	1,364,503	Hay	480,000
Oats	1,819,106	Cotton	24,995,061
Total			$41,031,195

Communications received from prominent planters in all sections of the State show that the price of land has gradually increased; that there is practically little land on the market; that there is a strong disposition to greater diversity in crops, and the impression is general that the crop of 1885 was produced at less cost than any crop made since the war, and that the financial condition of the farmers is improving.

Rice.—The following is a comparative statement of the total rice-crop of the United States for the past two years:

	1884-'85.	1883-'84.
Crop of South Carolina:	Barrels.	Barrels.
Milled in Charleston	85,310	67,476
Milled in Georgetown	21,679	21,426
Milled in Orangeburg	900	400
Total South Carolina	107,889	89,302
Crop of Georgia:		
Milled in Savannah	76,343	70,898
Crop of North Carolina:		
Milled in Wilmington, Washington, and Newbern	27,643	24,892
Total coast crop	211,875	184,592
Crop of Louisiana	202,131	237,491
Total crop of the United States.	414,006	422,083

Railroads.—In 1880 there were 1,403 miles of railroads in South Carolina. Since that time 240 miles have been completed, and many other important enterprises are in progress or projected. The new roads traverse the following counties: Abbeville, Barnwell, Chesterfield, Clarendon, Colleton, Edgefield, Georgetown, Laurens, Marlborough, Spartanburg, Sumter, and Williamsburg.

Charleston.—The subjoined statement shows the amount of the business in the principal articles of trade in Charleston during the year ending Aug. 31. In the case of cotton and other staples the receipts at this port are given, while in cotton goods, fertilizers, and vegetables the amount of the shipments is reported:

	1884-'85.	1883-'84.	1882-'3.
Cotton, upland	498,860	428,891	568,217
Sea-Island, bags	18,679	9,419	15,533
Rice, barrels	97,966	67,476	84,850
Turpentine, casks	44,099	64.207	68,937
Rosin, barrels	218,979	264,049	297,534
Phosphate rock, crude, tons	219,901	192,714	183,011
Phosphate rock, gr'nd, tons	21,640	22.837	32,999
Fertilizers, tons	158,136	143,790	130,000
Lumber, feet	30,033,961	34,063,170	37,202,530
Cotton goods, domestics, bales	44,004	45,104	30,000

At the close of 1885, Charleston had a total population of 60,145, against 49,984 in 1880; an increase of over 20 per cent. The white population is 27,605 and the colored 32,540. The colored surplus consists mainly of children.

On Aug. 25 Charleston was visited by a destructive cyclone.

SPAIN, a monarchy in southern Europe. The legislative power is vested in the Cortes with the King. The ministers are responsible to the Cortes, and must countersign all royal decrees. The Cortes is composed of a Senate and a House of Deputies. Senators are of three classes: High public functionaries and princes of the blood royal and grandees of Spain, who are senators in their own right; senators nominated for life by the Crown; and senators elected for five years by corporations and by citizens paying the highest taxes. The first two classes together must not exceed 180 members, which is also the limit of the third class.

The Chamber of Deputies is composed of members chosen for five years by the electoral colleges, in the proportion of one to every 50,000 inhabitants. Cuba sends deputies to the Cortes in the proportion of one to every 40,000 free inhabitants paying taxes to the amount of not less than $25 annnally.

The Queen-Regent.—By the death of King Alfonso, on Nov. 25, 1885 (see page 656), the sovereignty descended to his infant daughter Maria de las Mercedes, Princess of the Asturias, unless the Queen, who was *enceinte*, should give birth to a son. The new Queen was born Sept. 11, 1880. Her mother, the widowed Queen, Maria Christina, was, in accordance with a vote of the Cortes, proclaimed Regent during the minority of her daughter, or of the posthumous son if one should be born. Maria Christina, an Archduchess of Austria, daughter of the late Archduke Carl Ferdinand, was born July 21, 1858. She was educated in many branches of science and literature, and in 1876 was appointed lay Abbess of the Convent of Noble Ladies in Prague. On Nov. 29, 1879, she was married to King Alfonso, whose first Queen, Maria de las Mercedes, daughter of the Duc de Montpensier, had died June 26, 1878.

Area and Population.—The area of Spain, including the Canary and Balearic Islands and the small strip of Spanish territory on the Continent of Africa, opposite Gibraltar, is 197,767 square miles. The population at the close of 1883 was estimated at 17,034,915. At the census of Dec. 31, 1877, the legal population was 16,753,591. The towns with more than 100,000 inhabitants on June 30, 1884, were the following: Madrid, population, 391,829 (population inclusive of suburbs in 1883, 509,900); Barcelona, 247,187; Valencia, 144,048; Sevilla, 132,856; Malaga, 113,426.

Commerce.—The total value of the imports in 1883 was 893,446,011 pesetas; of the exports, 719,468,414. The countries furnishing the largest proportion of the imports were: France, to the amount of 234,900,000 pesetas; Great Britain, 188,300,000 pesetas; Germany, 86,700,000 pesetas; Belgium, 38,300,000 pesetas; Sweden and Norway, 25,800,000 pesetas; Russia, 25,200,000 pesetas; and Italy, 22,900,000 pesetas. The imports from the Continent of America amounted to 171,200,000 pesetas. Of the exports, 303,300,000 pesetas went to France, 205,200,000 pesetas to England, and 136,300,000 pesetas to America. The leading articles of importation are grain, textiles, brandy, timber, machinery, sugar, iron and hardware, and coal. The chief exports are wine, of the total value of 311,300,000 pesetas in 1883, fruits, coal and metals, animals and animal products, olive-oil, and cork.

The number of vessels that entered Spanish ports in 1883 was 18,625, of 2,918,702 tons, of which 8,366, of 696,575 tons, were Spanish; the total number cleared was 18,693. The merchant navy on Jan. 1, 1884, numbered 1,902 vessels of over 50 tons burden, including 426 steam-vessels.

Communications.—The length of railroads open to traffic on Sept. 1, 1884, was 8,889 kilometres. There were 3,444 kilometres in process of construction.

The number of letters, postal-cards, and circulars carried in 1882–'83 was 83,611,522 private internal, 8,124,760 official, and 19,295,460 international. The receipts of the post-office were 14,628,705 pesetas; the expenses, 7,203,833.

The length of telegraph lines in 1883 was 17,173 kilometres; the length of wires, 42,423, exclusive of 114 kilometres of underground lines and 236 kilometres of cables. The number of dispatches was 3,019,831, of which 198,515 were official, 654,214 international, and 79,922 transit dispatches. The receipts amounted to 5,151,480 pesetas.

The Army.—The military forces consist of a permanent army, an active reserve, and a sedentary reserve. Every Spaniard is liable to be drafted into the permanent army, but exemption can be purchased for about $300. The effective of the permanent army was fixed for 1884–'85 at 93,638 men, besides 20,000 officers; during the three months devoted to instruction it was greater by 28,000 men. The war strength of the continental army is about 452,000 men. Separate forces are maintained in the colonies, numbering 22,457 men in Cuba, 3,176 in Porto Rico, and 8,256 in the Philippines.

The Navy.—The navy consisted in 1885 of 5 iron-clad frigates, 4 screw-frigates of the first class, 4 of the second, 6 cruisers, and 107 other steamers. The largest ironclad is the "Vitoria," armored with 5½-inch plates lined with teak, and carrying four 12-ton, three 9-ton, and twelve 7-ton guns. In the West Indies, Spain maintains 35 gunboats, each armed with a 100-ton pivot-gun. The navy in 1885 was manned by 671 naval officers, 14,000 sailors, 376 officers of marines, and 7,033 marine infantry. The Caroline Islands difficulty (see Caroline Islands) prompted the Government to hasten the contemplated improvement of the navy. Orders were placed abroad for three new fast cruisers—a description of vessels preferred by Spanish officers to heavy ironclads. The new ships are to be armed with 5-inch steel guns, of a design invented by Brigadier Honterio, and with quick-firing shell-guns of the pattern adopted in England. The Nordenfeldt machine-guns, of 1-inch caliber, for firing volleys and combating torpedo-boats, and 6-pound shell-guns on the same system, have also been adopted in the Spanish navy.

Finances. — The total revenue for the year ending June 30, 1886, is estimated in the budget at 872,514,380 pesetas (1 peseta = 1 franc, or 19·3 cents), of which sum 259,848,000 pesetas are derived from direct taxation, 134,051,000 from indirect taxes, 134,000,000 from customs, 263,362,000 from stamps and *régies*, 32,602,380 from Government property, and 48,651,000 from treasury receipts. The total expenditure is estimated at 897,146,890 pesetas, of which 274,173,435 are appropriated to the service of the debt. The accounts for 1884–'85 were closed with a deficit of 25,500,000 pesetas.

The public debt, readjusted under the arrangement of 1881–'82, amounted on Oct. 1, 1884, to the capital sum of 6,356,253,000 pesetas, of which 1,971,151,000 pesetas represent the permanent foreign debt, 1,946,177,500 pesetas the permanent internal debt, and 1,677,165,000 the redeemable debt—all refunded at 4 per cent. The other debts include one of 3,000,000 pesetas due to the United States. The interest charges on the public debt in 1884 amounted to 238,071,429 pesetas. Separate obligations have been incurred on account of Cuba to the amount of over 180,000,000 pesos.

The revised Cuban budget for 1884–'85 showed an expenditure of 31,960,000 pesos, or dollars, and 27,650,000 pesos of estimated receipts.

The Municipal Elections.—Although in the past the party in power has always been able to manipulate the elections and secure enormous ministerial majorities, the Conservatives were badly defeated in the municipal elections that took place in May. When Señor Sagasta was in office, he secured a clear Liberal majority in Congress; but when Señor Canovas del Castillo came in, he obtained a strong Conservative majority. The bulk of the Spanish nation favors Liberal views; but the irreconcilable differences between the Liberal Monarchists and the Republicans, who are much the strongest section, rendered the Conservatives, in the opinion of King Alfonso, more capable of government. The Liberals of the various shades united to carry the municipal elections and record the national condemnation of the policy of the Government, and especially its clerical tendencies. The temporary coalition was then immediately dissolved.

Ministerial Changes.—King Alfonso announced his determination to visit the province of Murcia, where cholera was raging, on June 19; but Señor Canovas opposed the project, and, as the King persisted in his resolution, offered his resignation. Count Toreno, President of the Congress, was called to the palace. He declined to accept the responsibility of forming a new Conservative ministry, and of sanctioning the exposure of the King to the danger of death and the kingdom to the risks of a long regency. The King renounced the mission of charity, but subsequently he visited Aranjuez in secret, with the approval of the ministers.

The sanitary measures increased the unpopularity of Señor Romero y Robledo, who has been subject to incessant attacks since he assumed office—chiefly on account of the tyrannical character of the measures he took to preserve public order. He decided upon resigning, and on July 13 was replaced by Señor Villaverde, previously Governor of Madrid. Señor Antequera y Bobadilla, Minister of Marine, retired at the same time, and was succeeded by Admiral Pezuela. Señor Pidal, the Clerical Minister of Commerce, who was to Liberal Spain the most objectionable member of the Cabinet, remained in office.

The Death of King Alfonso.—The excitement aroused by the German occupation of Yap (see Caroline Islands) had a disturbing effect on the internal politics of Spain, bringing the country to the verge of revolution. Before the conflict was ended by the concessions of Germany and the award of the Pope, and before the kingdom had recovered from the unsettling effects of the warlike fever, the young King of Spain died of consumption, on Nov. 25. The agreement acknowledging the sovereignty of Spain over the Carolines was signed the same day in London and Berlin. King Alfonso's death was a sudden blow to the country, because the fatal disease with which he was afflicted was concealed from the public as well as it could be. Though generally suspected, it was officially denied that he suffered from phthisis. (See Alfonso, p. 656.)

The New Ministry.—After appointing the dowager Queen Regent, the ministers, in accordance with invariable custom, tendered their resignations. They advised the Queen-Regent to call upon Señor Sagasta to form a new Cabinet, which she did. A Liberal ministry was constituted Nov. 27, composed as follows: President of the Council, Señor Sagasta; Minister of Finance, Señor Camacho; Minister of the Interior, Señor Venancio Gonzalez; Minister of Marine, Admiral Beranger; Minister of Foreign Affairs, Señor Moret y Prendergast; Minister of the Colonies, Señor Gamazo; Minister of Public Works, Señor Montero Rios; Minister of War, Gen. Jovellar; Minister of Justice, Señor Alonso Martinez. The new ministry was formed of more advanced Liberal elements than Sagasta's former ministry. Sagasta, who was the predecessor of Canovas, and held the office of Prime Minister from

1881 to 1884, is the leader of the Left Center party. His colleagues represent all the various groups of the Monarchical Liberals excepting the Dynastic Left. Alonso Martinez, who guides the policy of the Government in ecclesiastical matters, is a representative of the extreme Right of the Liberal party, having been the leader of the Centralists. Of the same shade of opinions is Marshal Jovellar, who was associated with Martinez Campos in the *coup d'état* by which the Alfonsist monarchy was established. The latter general now became commander-in-chief, and took command of the Army of the North in order to guard against a possible Carlist outbreak. Gamazo, the Colonial Minister, is also a moderate Liberal. Moret y Prendergast, the brilliant orator, and Montero Rios, represent the left wing of the Liberals, and were identified with the Republican party four years before, and then for a time with the Dynastic Left. Moret is a zealous free-trader. Montero Rios, who succeeds Pidal in the direction of education, is a pronounced Radical. Admiral Beranger is likewise an advanced Liberal. The Prime Minister, who like Canovas assumed no special portfolio, the Home Minister, and the Minister of Finance, represent the central and by far the most numerous section of the party. Camacho and Gonzalez held the same posts in the former ministry of Sagasta until it was reorganized in 1883. Señor Camacho was an exceedingly capable and energetic Minister of Finance, who inaugurated a plan for reorganizing the disordered finances and rescuing the ruined credit of the country. Señor Sagasta some months before is said to have made terms with the extreme Liberals of the Monarchical party, and to have accepted their programme of universal suffrage, civil marriage, freedom of the press, trial by jury, and other provisions of the liberal Constitution, the abolition of which, in 1876, has been the cause of sore and lasting discontent. Señor Canovas del Castillo promised to extend to the new ministers his support, from the same patriotic motives that led him to resign. A considerable section of the Conservatives revolted against this policy, under the lead of the shrewd politician and powerful orator Romero y Robledo.

Dynastic Rivalries.—The position of the Queen-Regent was threatened by intrigues started by the relatives of King Alfonso, who strove to create prejudices against her as being a foreigner, unacquainted with Spain, who would be likely to surround herself with Austrians and Germans. The Government sought to counteract these efforts and administer a warning to the Bourbons by depriving members of the family of certain pensions and perquisites and offices about the court. The Duke of Sevilla, son of the Infanta Don Enrique de Bourbon and cousin of King Alfonso, on Dec. 18 demanded an audience with the Queen-Regent, and, when Queen Maria Christina refused to admit him, he insisted on his right to an interview as an officer of the Palace Guard, and angrily reviled "the Austrian," saying that he would prefer Isabella II for Regent. He was taken to prison. The cause of his complaints was that he had been dismissed from his command in the army and placed on half-pay.

The Queen-Regent took the oath to observe the Constitution on Dec. 30. The altercation between the palace officials and Queen Isabella's nephew was one incident out of many showing animosity on the part of the Regent and her supporters against the Bourbons, and the designs of the latter to upset the Regent. Queen Isabella remained away from the ceremony of the taking of the oath. The influence of the Regent's opponents was strengthened by the betrothal of King Alfonso's sister, the Infanta Eulalia, to the only son of the Duc de Montpensier. The intrigues in favor of Queen Isabella gave occasion for recriminations between the Conservative groups, and created an unpleasant sensation in the Cortes while they were debating the prolongation of the commercial treaties until the year 1892. Sagasta obtained the consent of the Regent to dissolve the Cortes. The new elections were appointed for March, 1886.

Failure of the Anglo-Spanish Convention.—A declaration was signed at Madrid, Dec. 21, 1884, securing a commercial *modus vivendi* between Spain and Great Britain, pending the negotiation of a definitive treaty of commerce. The arrangement was to last until June 30, 1887, and from that date was terminable only upon a year's notice. The general tariff of Spain is prohibitive in respect to many products of English manufacture, and discriminates severely against others. English goods are naturalized in France or Germany, and then enter Spain under the conventional tariffs, after having first paid the French or German duties. The convention granted to England the most-favored-nation treatment, in return for which the English Government promised to seek from Parliament the power to raise the lower half of the alcoholic scale on which duties are assessed from 26 to 30 degrees. This arrangement would let in the bulk of Spanish wines at the same low rate that is charged on French wines. While Mr. Childers's budget proposals were before Parliament, and the reduction of the duty on Spanish wine seemed to be assured, a disagreement arose as to the interpretation of the convention. The Spanish Government considered it to be terminable in two years' time, and insisted upon excluding the colonies of the two powers from its provisions. The English Government thereupon, May 18, broke off the negotiations. The Spanish Government was accused of seeking to evade its engagements, and in turn accused the English Government of manufacturing a pretext to defeat the *modus vivendi*, particularly since the proposal of a one-shilling duty on Spanish wines was not included in the amended budget of Sir

Michael Beach. An act authorizing the reduction was passed by the British Parliament on April 30. The Spanish Cortes approved the *modus vivendi*, but excluded the Philippines from its operation, and made it terminable in 1887. Sir Robert Morier, who went as British ambassador to Madrid three years before for the express purpose of negotiating a commercial treaty, and devoted his time mainly to that end, returned to England in July, after several stormy interviews with the Spanish Secretary of State, in which charges of bad faith were made on both sides. The neglect of the English authorities to co-operate in the suppression of smuggling across the line at Gibraltar was alleged as a further ground of complaint against England. This was the reason for which Señor Canovas rejected once before the *modus vivendi*, which was originally agreed to by Posada Herrera, on Dec. 1, 1883. The protective interests of Catalonia brought powerful political forces to bear against the commercial arrangement, and Canovas, on coming into office, was swayed by the popular clamor. This second rupture was the act of the British ministry, and was believed to be due to the exigencies of the British Exchequer and the outcry against taxing the poor man's drink and lifting the duty from that of the rich man. The English Government, however, while not laying much stress on the inclusion of the Spanish East Indies, claimed that the prolongation of the preliminary convention beyond June 30, 1887, though ambiguously expressed in the instrument, was clearly understood to be a *conditio sine qua non*. The Spanish Prime Minister could not deny that there was an understanding that a year's notice should be allowed, and that the arrangement should be exempted from the operation of a general act, called the *Base Quinta*, in accordance with which all commercial treaties, except that with France, come to an end on June 30, 1887. Sir Michael Hicks-Beach announced in the House of Commons, on July 16, that negotiations were definitively abandoned.

Popular Disturbances.—The action of the authorities in officially declaring the existence of cholera in Madrid led to a riot on June 20. The dissatisfied tradesmen closed all their shops, and, collecting in the streets, threatened Señor Villaverde, the civil governor, and other officials. Gen. Pavia, Captain-General of Madrid, ordered out the military. In clearing the streets, the civil guards fired upon the rioters, killing two men and wounding twenty.

In July a wide-spread conspiracy of republican revolutionists, led by insurgents recently expelled from Badajos, was discovered by the police. Its ramifications extended through Catalonia and the neighboring provinces. The headquarters were in the vicinity of Mataro. In many towns and villages bands of armed men were formed and sworn to overthrow the monarchy. A meeting of conspirators in Saragossa was interrupted by the police, who arrested all present, and secured about 100 rifles. Another band was discovered drilling in the outskirts of Mataro, and half of them were captured. The leader of the first band was Col. Magallon, who was tried by court-martial and shot. About Nov. 1 an attempt was made to start a revolution at Cartagena. A band of Zorillists boarded a convict-galley and liberated the prisoners. It was arranged to release all the convicts in the main prison as well, and with their aid begin a civil war for the establishment of the republic. The plot was frustrated by a sentinel, who was shot by the conspirators after he gave the alarm.

Earthquakes.—A succession of severe earthquakes began in southern Andalusia on Christmas-day of 1884. Three days before, slight tremors were felt at Vigo and Pontevedra. The center of the disturbance was near Alhama, which town was nearly annihilated. At Albunuelas, to the southeast, 1,000 houses were thrown down. The shock traveled farther westward and northward than eastward, being felt as far north as Madrid. It was most destructive on the two sides of the western spur of the Sierra Nevada, known as the Sierra de Alhama, and the Sierra de Almijara. Malaga Antequera, Archidona, Loja, Granada, Jerez, and other places along the coast immediately south of the range suffered severely, while the towns on the northern slope were almost ruined. The area of most destructive disturbance was between Granada, Motril, Antequera, and Malaga, and measured about sixty-five miles east and west, and thirty-three north and south. There was a land-slip at Periana, which destroyed 750 houses. A village in Granada was moved away bodily sixty feet, leaving a hole in which a lake was formed by the river that flowed by the village. The loss of life was about 1,000 in the province of Granada, and over 800 in Malaga. Many thousand people were left homeless. The King visited the desolated district. The Government remitted the taxes and granted money aid. Subscriptions were raised throughout Spain, and were sent from America, England, and other countries. For weeks after the sharp shocks of Dec. 25 and 26, there were tremblings in the valley of the Zehil. In the night of Dec. 25, after the first severe convulsion, there were eight other distinct shocks. From that day till Jan. 5 there were one or more shocks every day, one particularly severe on Dec. 28.

The Caroline Islands.—The decision of the Pope in the Caroline Islands arbitration was formulated in six articles. In the first, Germany recognizes the sovereignty of Spain over the Palaos and Caroline Islands. The second defines the boundaries of the island groups conceded to Spain. The third contains in respect to the commercial and navigation rights of Germany the same provisions as the treaty of 1885 granting freedom of commerce in the Suln Islands. The fourth cedes to Germany a naval station and coaling depot on the islands, and recognizes the German commercial companies in the Carolines. The sixth provides for the ratification of the instrument within eight days. The protocol was signed by both governments. Spanish sovereignty is acknowledged over all islands lying between the equator and 11° north latitude, and between 133° and 164° east longitude.

The Sulu Convention.—On March 7, 1885, the representatives of Great Britain and Germany at Madrid signed a protocol recognizing the sovereignty of Spain over the Sulu Archipelago, extending from Mindanao to Borneo and the adjacent island of Paragua, and including the islands of Balabac and Cagayan-Jolo. The Spanish Government renounced all claims to the former dominions on the island of Borneo and neighboring small islands formerly belonging to the Sultan of Sulu or Jolo, which now form the territories of the North Borneo Company. The Spanish Government grants entire freedom of commerce in the Sulu Islands, and Great Britain guarantees the same in North Borneo.

Colonies.—The area and population of the transmarine possessions of Spain are as follow:

COLONIES.	Square miles.	Population.
Cuba	43,220	1,521,684
Porto Rico	3,550	754,313
Philippine Islands	114,326	5,561,232
Sulu	950	75,000
Caroline Islands and Palaos	560	36,000
Marian Islands	420	8,665
Fernando Po, Annobon, Coresco, Elobey, San Juan	850	85,000
Total	163,876	7,991,894

Porto Rico is a fertile island with an industrious population, free from the revolutionary disturbances that interfere with the prosperity of Cuba. It exports 50,000 tons of sugar annually to the United States. The Marian Islands produce sugar and copra. The leading export article of the Philippines is tobacco, which is exported to the extent of 46,000,000 kilogrammes, besides 90,000,000 cigars per annum. Coffee, the next most important product, is produced in increasing quantities; the export is about 50,000 cwt. a year.

Great attention is paid to cabonegro, a new fiber, obtained from the leaf-stems of a palm, from which the best ropes are made. The extraction of perfumery essences is an industry of some importance. Other articles of export are indigo, cotton, cinnamon, pepper, sandalwood, horns and hides, trepang, mother-of-pearl, tortoise-shell, fish, etc. The export of sugar is very great, approaching in magnitude that of the British West Indies. Manila hemp is an important commercial product. Dye-woods and cabinet-woods of many kinds are exported.

The territory on the West Coast of Africa between Capes Bojador and Blanco was placed under Spanish protection in December, 1884. The explorer Bonelli was appointed in July, 1885, royal commissioner, with supreme military and civil command over this district, and the right to conclude treaties with the natives, and to take possession of further territory, subject to the approval of his Government.

SURGERY. Abdominal Section.—Remarkable advances have lately been made in the surgery of the abdominal cavity. Early in the year Mr. Lawson Tait reported a series of a thousand cases in which the abdominal cavity had been opened for the relief of a variety of conditions, with a mortality of but 9·3 per cent. In connection with this branch of surgery, the diseases of the uterine appendages known as hydro-salpinx and pyo-salpinx (which are essentially an enlargement of the Fallopian tubes, the cavity containing fluid, and complicated in many cases with inflammation or its results in the neighboring organs) have attracted much notice. Mr. Tait was among the first to direct attention to the frequent existence of this condition, and to the comparative safety of operations for the removal of the diseased organs when performed with proper precautions. The number of such cases operated on by Mr. Tait and many other surgeons has already become very considerable, and the relief that has been afforded to women whose lives had previously been rendered miserable is so great as to warrant the assertion that there has been hardly an operative procedure introduced for many years which has produced such notable results.

Within the year several successful operations have been reported in which the abdominal cavity has been opened, and wounds in the intestines have been closed—a class of cases that have heretofore been regarded as essentially fatal. The gall-bladder has been opened for the removal of gall-stones, with successful results. Kidneys have been removed on account of disease. Cases of chronic and acute peritonitis have been treated by opening the abdomen to secure drainage and removal of the causes and products of the disease.

The Brain.—On Nov. 24, 1884, Mr. R. J. Godlee and Dr. Hughes Bennet, of London, removed a portion of the skull of a patient supposed to be suffering from a tumor of the brain, and, after making an incision a fourth of an inch in depth into the substance of the brain, excised a hard, gummy tumor of the size of a walnut. The patient recovered.

The Eye.—Several experiments have been made to transplant the eye of an animal, with a view to replacing a diseased eye with one that would present less deformity. Thus far the operation has proved but moderately successful, although the results warrant a continuance of the attempts.

The Lungs.—A novel mode of arresting hæmorrhage from the lung, such as occurs in phthisis, and has resisted other measures, was reported to the London Clinical Society by Dr. Caley. A patient in the Middlesex Hospital having had severe and uncontrollable hæmorrhages during several weeks, Mr. Hulke made an opening through the chest-wall, a drainage-tube was inserted, and its outer opening was guarded with an antiseptic dressing. The admission of air to the pleural cavity led to collapse of the lung and diminished the circulation of blood through it. Breathing was quickened, and the hæmorrhages ceased almost immediately, blood being coughed up but twice during the following night. Death occurred suddenly five days after the operation, when the former hæmorrhage was discovered to have come from a good-sized branch of the pulmonary artery. As a modification of the operation, it has been proposed to inject carbolized air by means of a syringe, instead of forming an opening with the knife.

Intubation of the Larynx.—An operation introduced by Dr. Joseph O'Dwyer, of New York city, consists in inserting through the opening between the vocal cords a metallic tube, oval in section and from one and a half to two inches in length. It is provided with a flange at its upper extremity, and with a thread that permits of its easy removal. It has been used already in a large number of cases of croup, and spasm of the laryngeal muscles, where death from suffocation was threatened, and where an opening into the trachea has been the customary surgical procedure. Thus far the results have been remarkably favorable, far superior to those following tracheotomy.

SWEDEN AND NORWAY, two kingdoms occupying the Scandinavian Peninsula in northern Europe, united indissolubly, by the Riksact of 1815, in the person of the sovereign. Succession to the throne is hereditary in the house of Ponte Corvo. The common affairs of the two kingdoms are decided by a Council of State. The reigning King is Oscar II, born Jan. 21, 1829, grandson of Marshal Bernadotte, and the fourth sovereign of the line.

SWEDEN. Constitution.—The legislative powers are vested in the Diet, subject to the approval of the King, save in matters of political administration and taxation, the former of which is the exclusive province of the sovereign, and the latter that of the Diet. The Diet consists of two chambers, both elective. The franchise is limited by a property qualification.

The Ministry.—The Council of State is composed as follows: Oscar R. Themptander, appointed Minister of State, May 16, 1884, and Minister of Finance, March 8, 1881; Baron C. F. L. Hochschildt, Minister of Foreign Affairs, appointed April 27, 1880; Dr. N. H. Vult von Steyern, Councilor of State and Chief of the Department of Justice, appointed April 19, 1880; Major-General K. A. Ryding, Councilor of State at the head of the Department of War, appointed June 16, 1882; Baron C. G. von Otter, Councilor of State and Chief of the Navy Department, appointed April 19, 1880; Dr. C. G. Hammarskjöld, Councilor of State and Chief of the Department of Ecclesiastical Affairs, appointed Aug. 27, 1880; J. E. von Krusenstjerna, Councilor of State and Chief of the Department of the Interior, appointed Nov. 30, 1883; and Councilors of State Dr. J. H. Lovén, appointed June 5, 1874; J. C. E. Richert, appointed Aug. 27, 1880; and Baron C. G. A. Tamm, appointed May 19, 1884.

Area and Population.—The area of Sweden is 170,979 square miles. The population at the end of 1884 was estimated at 4,644,488.

The mean number of emigrants in the ten years 1851–'60 was 1,690; in 1861–'70, 12,245; the number in 1870, 29,003; in 1871, 17,450; in 1872, 15,915; in 1873, 13,580; in 1874, 7,791; in 1875, 9,727; in 1876, 9,418; in 1877, 7,610; in 1878, 9,032; in 1879, 17,637; in 1880, 42,109; in 1881, 45,992; in 1882, 50,178; in 1883, 31,605.

The population of Stockholm, the capital, was 205,129 in 1884.

Commerce.—The total value of the imports in 1883 was 333,929,000 crowns, against 229,820,000 in 1882; the total value of the exports was 256,531,000, against 253,887,000 crowns. Germany furnished more than a quarter of the imports, England about a quarter, Denmark a sixth, Russia nearly a twelfth, and Norway a sixteenth. Of the exports, England took one half, Denmark an eighth, France nearly as many, and Germany less than one fifteenth. The imports from the United States were 9,481,000 crowns, the exports to the United States 339,000 crowns. The leading article of export is timber, and the next in importance metals. The commercial navy in 1884 consisted of 3,337 sailing-vessels, of 451,206 tons, and 845 steamers, of 100,720 tons. The tonnage engaged in foreign commerce was 451,889; in the coasting trade, 100,037 tons.

Communications.—The number of letters carried in 1883 was 41,579,077, including post-cards. The receipts of the post-office were 5,916,220, the expenditures 5,124,711 crowns.

The length of the state telegraph lines in 1884 was 8,562 kilometres, the length of wires 20,871; the number of dispatches was 1,178,952, of which 619,634 were internal, 429,383 international, and 129,942 in transit. The receipts amounted to 1,329,927, the expenses to 1,243,575 crowns.

The length of the state railroads in 1885 was 2,312, of companies' lines 4,288 kilometres.

Army and Navy.—The total number of enrolled and cantoned troops, the two classes constituting the permanent army, in 1885, was 7,886 of the former and 27,193 of the latter. The total war strength of the army was 195,171 men, with 258 field-guns and 5,637 horses.

The navy consisted, in 1884, of 1 frigate, 4 corvettes, and a number of monitors, torpedo-vessels, small gunboats, etc. The only iron-clads were 4 monitors with 5-inch plates and 2 heavy guns each, and 10 gunboats. The fleet was manned by 600 sailors and 4,670 marines, besides officers, mechanics, etc. The naval militia numbers about 50,000 men.

Finances.—The budget for 1886 makes the total receipts 82,354,500 crowns (1 crown = 26·8 cents), and the expenditures the same. Of the receipts 20,546,000 crowns are derived from what are called the ordinary sources, viz., the land-tax, navigation dues, domains, the poll-tax, the railroads and telegraphs, forests, etc.; 53,395,000 crowns are derived from extraordinary sources, comprising the customs duties, the post-office receipts, stamps, the spirit duty, the income-tax, the duty on beet-sugar, etc.; 6,989,000 crowns are surplus receipts of former years; 224,500 crowns come from a reserve fund for the postal administration; and 1,200,000 are the profits of the Bank of Sweden. A large part of the military and of the ecclesiastical expenditures are not included in the budget, but are provided for from the profits of public domains reserved for the purpose.

The public debt outstanding on Jan. 1, 1885, amounted to 230,205,794 crowns, of which 33,404,200 represent two internal loans, and 196,801,594 foreign loans, paying 4 and 4½ per cent. interest.

Legislation.—Protective duties on breadstuffs and provisions met with no favor in the Swedish Diet. In March, bills to tax imports of wheat, flour, maize, and pork were rejected by large majorities. A bill extending the period of military service was rejected by the lower house. The Government offered as an inducement for its acceptance to lower the land-tax 30 per cent. The Popular Chamber demanded the reduction of taxes without an increase of the military burden. A compromise was reached, fixing the universal drilling period at twelve days, and establishing the period of six years for the first and second levies, and also for the Landsturm.

NORWAY. **Constitution.** — The Grundlov of Nov. 4, 1814, vests the legislative power in the Storthing. The executive authority is exercised in the name of the King by a State Council, composed of two Ministers of State and at least seven councilors. Two councilors, who are changed annually, and one of the ministers, form a deputation residing near the person of the King, at Stockholm.

The Ministry.—The Council of State, constituted June 26, 1884, is made up of the following members: Johan Sverdrup, Minister of State and Chief of the Department of National Defense; H. G. I. Stang, Chief of the Interior Department; J. L. R. Sverdrup, Chief of the Department of Worship and Public Instruction; A. A. Sörenssen, Chief of the Department of Justice and Police; B. M. Haugland, Chief of the Department of Finance and Customs; B. Kildal, Chief of the Department of Revision of Accounts, appointed July 16, 1884; H. R. Astrup, Chief of the Department of Public Works, appointed Aug. 3, 1885; O. Richter, Minister of State, residing at Stockholm; and Dr. E. Blix and S. A. B. Arctander, Councilors of State at Stockholm.

Area and Population.—The area of Norway is 122,869 square miles. The population in 1875 was 1,806,900. The number of emigrants in 1871 was 12,276; in 1872, 13,865; in 1873, 10,352; in 1874, 4,601; in 1875, 4,048; in 1876, 4,355; in 1877, 3,206; in 1878, 4,863; in 1879, 7,608; in 1880, 20,212; in 1881, 25,976; in 1882, 28,804; in 1883, 22,167. The population of Christiania, the capital, in 1884, was 124,155.

Commerce.—The total value of the imports in 1884 was 158,796,000 crowns, against 161,315,000 in 1883; the value of the exports, 112,199,000, against 116,139,000 crowns. Of the imports about 28 per cent. come from Germany on the average, 27 per cent. from Great Britain, and 9 or 10 per cent. each from Denmark, Sweden, and Russia. Of the exports, Great Britain takes 33 per cent.; Germany, 14 per cent.; Sweden, 12 per cent.; and Spain, 10 per cent., chiefly fish. Fish and timber constitute each about one third of the total exports. The tonnage entered at Norwegian ports in 1883 was 2,296,527 tons, of which 1,533,475 were Norwegian; the tonnage cleared was 2,301,965 tons. The merchant marine in 1884 numbered 7,899 vessels, of 1,547,194 tons, with 60,523 sailors. There were 407 steamers, of 82,519 tons. There are about 120,000 persons and 25,000 boats employed in the fisheries, three fourths of them in the codfisheries.

Communications.—The length of railroads open to traffic in 1885 was 1,562 kilometres. The length of the state lines of telegraph at the end of 1884 was 7,345, of wires, 13,548 kilometres. The number of dispatches was 890,749, of which 496,119 were internal. The receipts were 964,767, the expenses 1,006,102 crowns. The railroad telegraph lines had a length of 1,614 kilometres, with 2,488 kilometres of wires.

The number of letters that passed through the post-office in 1884 was 18.923,574, of which 13,571,350 were internal. The receipts were 2,124,832 crowns, the expenses 2,178,992 crowns.

Army and Navy.—The troops of the line number 750 officers and 18,000 men, which figures must not be exceeded without the consent of the Storthing. The landvaern, or militia, and the landstorm, or final levy, can be called out only for the defense of the country. The fleet of war in July, 1885, numbered 42 steamers, of which 4 were iron-clad monitors, 2 frigates, 2 corvettes, 4 torpedo-boats, and the rest gunboats. The navy was manned by 112 officers and 317 sailors on permanent engagement. The naval militia in 1884 numbered 27,300 men.

Finances.—The total receipts of the treasury during the year ending June 30, 1884, were 40,840,500 crowns, of which 18,638,300 were derived from customs, 5,941,800 from railroads, 2,960,400 from the spirit-tax, 2,082,800 from the malt-tax, 2,071,100 from the post-office, and the remainder from domains and other sources. The total expenditures were 42,116,-

800 crowns, including 1,247,800 crowns of extraordinary expenditure on railroad construction. The national debt amounted, on June 30, 1884, to 106,831,600 crowns, and was offset by 135,438,300 crowns of reproductive investments.

The Conflict with Sweden. — The diplomatic affairs of Norway have hitherto been confided to the direction of the Swedish Minister of Foreign Affairs. Johan Sverdrup, following up the victory won for the constitutional liberties of Norway in 1884, demanded that the foreign relations of the united kingdoms should be directed by a Council of State, consisting of three Swedish and three Norwegian members, under the presidency of the King. King Oscar assented to the proposition, but in Sweden it met with much opposition, and led to the retirement of Baron Hochschildt, the Foreign Minister. The Norwegian Prime Minister intimated that if the Swedes would not accede to a joint diplomacy, Norway would exercise her constitutional right to conduct her diplomatic affairs independently of Sweden. The idea of the dissolution, since the events of the last two years, has taken root in Sweden as well as in Norway. In Sweden its advocates are the conservative believers in a strong government and upholders of the kingly prerogative. The only way they see to arrest the spread of liberal theories in Sweden is to cut loose from Norway, and thus escape from the contagion of Norwegian radicalism. Another class of Swedish Conservatives are so imbittered over the success of the Norwegians in the constitutional conflict that they would not shrink from an attempt to suppress the Norwegian Constitution and incorporate Norway in the Swedish monarchy. A royal decision in favor of a Common Council of State for Foreign Affairs was published May 15, 1885. As it involves a change in the fundamental law, it requires the ratification of the Norwegian Storthing and also of the Swedish Diet. The Conservatives of Sweden, more royalist than the King, have become greatly excited over the concessions that King Oscar is inclined to make to the Nationalists in Norway, particularly the agreement of May 15, and openly accuse him of betraying the interests of the Swedish fatherland.

SWITZERLAND, a federal republic in central Europe. The legislative and executive authority of the confederacy is vested in the State Council, composed of forty-four members, chosen by the twenty-two cantons, and the National Council or Nationalrath, chosen by direct election at the rate of one member for every 20,000 inhabitants. Every male citizen over twenty years of age is a voter. Clergymen are not eligible. The Chambers united form the Federal Assembly. The executive authority is delegated to the Bundesrath, or Federal Council, consisting of seven members, chosen for three years by the Federal Assembly. The President and Vice-President of the Federal Council are elected by the Federal Assembly for one year, and are not eligible for the next consecutive term.

The President of the Confederation for 1885 was Dr. K. Schenk, of the canton of Bern, who had charge of the Political Department in the Federal Council. Dr. A. Deucher, of Thurgau, had the direction of the Interior; L. Ruchonnet, of Vaud, the Department of Justice and Police; F. W. Hertenstein, of Zürich, Military Affairs; B. Hammer, of Solothurn, Finance and Customs; N. Droz, of Neufchâtel, Commerce and Agriculture; Dr. E. Welti, of Aargau, Posts and Railroads. Dr. Deucher was on Dec. 15, 1885, elected President for 1886, and N. Droz Vice-President. The departments were distributed as follows: Political Department, President Deucher; Interior, Schenk; Justice, Ruchonnet; Military, Hertenstein; Finance, Hammer; Commerce and Agriculture, Vice-President Droz; Posts and Railroads, Welti.

Area and Population.—The area of Switzerland is 15,892 square miles. The population in 1880 was 2,846,102. The number of emigrants in 1884 was 8,975, of whom 7,809 went to North America. The city of Geneva in 1880 contained 50,043 inhabitants, or, including the suburbs, 68,320; Zürich, with its suburbs, had 75,956; Basle, 61,399; Bern, 44,087. The number of Swiss in the United States in 1885 was 133,702.

Commerce.—Of 22,222,177 metric quintals of goods imported in 1884, 13,662,332 quintals came from Germany, 5,948,271 from France, 1,395,637 from Italy, and 1,215,937 from Austria. The total weight of the exports was 3,426,896 metric quintals. The values of imports and exports in 1883 are officially estimated as follow, in francs:

CLASSES OF ARTICLES.	Imports.	Exports.
Food, drink, tobacco	$202,337,000	$91,051,000
Raw materials	345,540,000	123,205,000
Manufactures	225,639,000	576,801,000
Miscellaneous	5,496,000	2,704,000
Total	$869,012,000	$793,761,000

Communications.—The length of railroads in operation at the beginning of 1884 was 2,960 kilometres, including the 64 kilometres of the St. Gothard system.

The length of telegraph lines at the close of 1884 was 6,874 kilometres, of wires 16,618 kilometres. The number of dispatches in 1884 was 2,942,767, comprising 1,724,989 internal, 835,429 international, 291,882 transit, and 90,467 official telegrams.

The number of letters forwarded in 1884 was, including postal-cards, 87,083,978, of which 27,902,732 were foreign. The receipts of the post-office were 15,384,151, the expenses 14,202,284 francs.

The Army.—The military law of 1874 requires every able-bodied citizen to serve twelve years in the Auszug and twelve years in the Landwehr. The strength of the Auszug in 1885 was 114,928, that of the Landwehr 85,286 men. A commission of superior officers, appointed to elaborate a scheme of frontier defense, in 1883 submitted a report to the Military Department. The Bundesrath found the project too costly, and appropriated only 500,000 francs for fortification works in 1886. The Swiss militia is the only army in Europe that is armed throughout with repeating rifles.

Finances.—The revenue in 1884 amounted to 47,605,079 francs, of which 21.486,578 were derived from customs and 15,384,151 from the post-office. The total disbursements were 46,190,092 francs. The revenue for 1885 was estimated at 45,882,000 and the expenditure at 45,740,000 francs. The customs duties produced in 1885, 21,063,279 francs. The debt of the Confederation on Jan. 1, 1885, amounted to 35,510,342 francs, and the productive capital to 56,848,496 francs.

In the budget for 1886 the revenue is estimated at 57,304,000 francs, and the expenditure at 57,774,000 francs.

The Temperance Question.—The plan adopted for combating the growth of intemperance in Switzerland was to impose heavy duties on the importation and manufacture of spirituous liquors. To enable the central Government to carry out this scheme, it was necessary to abolish the inter-cantonal tolls and imposts on spirits, for which a constitutional amendment was requisite. The amendment was carried by the popular vote on Oct. 25. The cantons were promised a share in the new duties that would considerably augment their revenues. The annual consumption of spirituous beverages in Switzerland is estimated to be 200,000,000 litres of wine, of which 97,000,000 litres are imported, above 200,000,000 litres of cider, more than 100,000,000 litres of beer, and 27,000,000 litres of distilled liquor, of which 20,000,000 litres are imported in the form of spirits of wine. There is, besides, a large consumption of absinthe, Kirschwasser, brandy made from gentian, and cognac.

Federal Legislation.—A treaty concluded by Col. Frey with the State Department at Washington for the reciprocal protection of trademarks on Feb. 14, 1885, was approved by the Federal Council in March. The Federal Assembly, in the session that began Dec. 7 and closed Dec. 24, 1885, passed thirty-five acts, but the most important bills were not acted upon.

The Church Question in Ticino.—The Clerical majority in the Executive Council of the canton of Ticino approved of a settlement of the long-standing differences between the civil and clerical authorities that entirely accorded with Clericalist views. The jurisdiction of the apostolic administrator was extended to various branches of cantonal and communal administration and criminal jurisprudence. The proposals became law by act of the Grand Council of the canton.

The Anarchists in Switzerland.—In the early spring, several persons were arrested on suspicion of being engaged in a dynamite plot to destroy the Federal palace in Bern. About forty persons in Bern, Zürich, St. Gallen, and Geneva were arrested by order of the Federal Council. In a few weeks they were discharged without trial, and it was said that the plot was the work of paid *agents provocateurs* of the German police. The Federal Council did not rest in its efforts to rid Switzerland of foreign revolutionists. The most obnoxious of this class were the agents of Johann Most's "Freiheit." The spread of socialistic ideas among Swiss working-men gave the propertied classes a special reason for objecting to the presence of foreign anarchists, of whom there were estimated to be 1,500 in Switzerland. After the Stellmacher affair eleven persons were expelled from the confederation. In June, 1885, on the suggestion of the Police Department, the Federal Council decreed the expulsion of twenty-one anarchists. In September, five more were expelled for affixing incendiary placards in the streets of Glarus and Lausanne.

The Simplon Tunnel.—The financial arrangements for tunneling the Simplon have been concluded. The work is estimated to cost 89,070,000 francs, and is to be completed in seven years. The sum of 67,000,000 francs is to be raised on 3 per cent. mortgage bonds, guaranteed by the Federal Government and the cantons of western Switzerland; 4,500,000 francs of the capital are contributed by the Federation, and 4,000,000 by western Switzerland.

Conference for the Protection of Literary Property.—An international conference for drafting an international copyright convention met at Bern on Sept. 7. France, England, the United States, Belgium, Spain, and the Netherlands were represented by their accredited diplomatic agents; Germany, Italy, and Sweden, by special delegates. Federal Councilor Droz presided. There were delegates also from the Argentine Republic, Paraguay, Hayti, Honduras, Costa Rica, and Tunis. The project for a treaty provides that the states forming the union for the protection of authors' and artists' rights in their works shall each extend to the citizens of the other states the same rights in their intellectual productions that their laws give to their own citizens. The previous publication of a work does not debar an author of his rights. The duration of copyright follows the law of the country where the work is first published, or, in case of simultaneous publication, of the country where the copyright period is shortest. A copyright can be obtained in any of the states composing the union by fulfilling the conditions and formalities required of its own citizens. Publishers can copyright the works of authors belonging to states outside of the copyright union. The author of a literary work, or his heirs and assigns, enjoy the exclusive right of translation in all the states of the union for ten years from the date of publication. A Bureau of the International Union for the Protection of Literary and Art Works is to be established in Bern. The convention is to enter into force three months after the exchange of ratifications. Any state can withdraw upon a year's notice. The Swiss Government was requested to invite the several governments to a diplomatic conference for the conclusion of a definitive treaty at the end of a year.

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TASMANIA. See page 66.

TENNESSEE. State Government.—The following were the State officers during the year: Governor, William B. Bate, Democrat; Secretary of State, John Allison; Treasurer and Insurance Commissioner, J. W. Thomas; Comptroller, P. P. Pickard; Attorney-General, B. J. Lea; Superintendent of Public Instruction, T. H. Paine; Commissioner of Agriculture, Statistics, and Mines, A. J. McWhirter; Register of Lands, W. S. Winbourn. Judiciary, Supreme Court: Chief-Justice, James W. Deaderick; Associate Justices, William F. Cooper, Thomas J. Freeman, Peter Turney, and Robert McFarland.

Legislative Sessions.—The Legislature met on Jan. 5, and adjourned about the middle of April. One hundred and sixty-seven bills were passed, of which the following were the most important:

To encourage the raising of blooded stock.

To amend the act establishing taxing districts of the first class.

To establish referee court for Middle Tennessee.

To amend the act providing for the organization of corporations.

Appropriating $95,000 to finish the East Tennessee Insane Asylum.

To take private property for internal improvements.

To pay post-notes.

To repeal the Railroad Commission.

To punish polygamy.

To authorize municipal corporations to issue bonds.

To provide for the descent of estates of illegitimate children.

Continuing liens of decrees of Chancery Courts.

To punish the killing of another's stock.

To prohibit the playing of base-ball, cricket, or any other game of ball, bat, or club on the Sabbath.

To prohibit the sale of intoxicating bitters within four miles of institutions of learning, except within incorporated towns and cities.

To enable county courts to build bridges over streams or rivers.

To incorporate the purchasers of the property and franchise of any incorporated company of this State, when sold under mortgage.

To change the line between the counties of Overton and Clay; also between Overton and Pickett.

To provide for the appointment of commissioners on the part of this State to act with commissioners on the part of North Carolina, for the purpose of ascertaining the true boundary-line between said States.

To fix the time when taxes assessed for the support of taxing districts shall become delinquent.

To amend the fish law, and allow any person to catch fish by means of any trap, box, basket, or bait net, any of whose meshes or openings are not less than one and a half inch in diameter, in any stream in this State as far as navigable.

To extend the statute of limitation on realty, and to quiet titles to ten years from the maturity of the debt.

To perfect the mechanic lien law, and to secure to the mechanic his just reward.

To protect the public, define the rights of carriers of passengers, and prevent and punish certain discriminations at public places of amusement and resort.

Providing that a municipal corporation or taxing district having 36,000 shall not bury its dead within its corporate limits.

Providing that notaries public, duly and lawfully commissioned by the proper authorities of other States than Tennessee, empowered by law of such State or States to take depositions, are hereby authorized to take depositions to be used in the courts of this State upon the same terms that are provided for the taking of depositions by other officials in such States.

To incorporate an independent militia.

A registration law was defeated by most of the Republican Senators near the close of the session absenting themselves, thus breaking a quorum. Their objection to the registration bill was its "partial application to certain localities, which rendered it not only unjust and oppressive, but also unconstitutional."

The bill abolishing the Railroad Commission was passed over the Governor's veto. A resolution was passed proposing a prohibitory amendment to the Constitution, as follows:

> To add as section 18 to Article XI the following: "No person shall manufacture for sale, or sell or keep for sale as a beverage, any intoxicating liquors whatever, including ale, wine, and beer. The General Assembly shall by law prescribe regulations for the enforcement of the prohibition herein contained, and thereby shall provide penalties for the violation of the provisions thereof."

On May 16 the Governor issued a proclamation calling the Legislature together in extra session on May 25. The following were the principal objects specified in the call: To provide revenue; to make appropriations for current expenses; to make effective the funding act of 1883; to prevent the cattle-plague from spreading; to redistrict the State; and to pass a registry law. The extra session adjourned about the middle of June. Bills were passed on most of the topics suggested by the Governor. The registration bill again failed—this time by the Republican members of the House breaking a quorum.

Valuation and Taxation.—The following statement exhibits the assessment of property in 1884:

Land in acres in East Tennessee	$39.313,060	
Land in acres in Middle Tennessee	67,216,943	
Land in acres in West Tennessee	39,332,838	
		$145,862,841
Town lots in East Tennessee	$12,043,144	
Town lots in Middle Tennessee	23,239,704	
Town lots in West Tennessee	19,067,211	
		54,850,059
Other taxables in East Tennessee	$6,097.545	
Other taxables in Middle Tennessee	15.914.976	
Other taxables in West Tennessee	4,618,763	
		26,631,284
Total taxable property		$226,844,184

The total amount of revenue collected from the counties in 1883 was $786,829.88; in 1884, $1,029,990.30. In 1884 the privilege-tax amounted to $334,870.04—East Tennessee returning $67,006.06; Middle Tennessee, $145,681.01; West Tennessee, $122,182.97. In 1885 the privilege-tax was $341,343.71; net amount, $206,389.55.

Iron-Furnaces.—There are in Tennessee 9 charcoal furnaces, 2 of which are in blast with a capacity of 490 tons a week, and 7 out of blast with a capacity of 569 tons a week. There are also 8 coke-furnaces—6 in blast with a weekly capacity of 2,620 tons, and 2 out of blast with a capacity of 980 tons a week.

Peanuts.—The crop in Tennessee in 1884 far exceeded all expectations. The following table exhibits the movement of the crop to Sept. 30, 1885:

	Bags.
Cincinnati receipts	168,727
Sent to Norfolk direct	12,000
Sent to other points	29,273
Yet in Tennessee	40,000
Total bags	250,000
Equal to bushels	1,250,000

TERRAPIN-CULTURE. The species of the family *Emydoidæ* most highly prized as an article of food is commonly known as the diamond-back terrapin (*Malacoclemmys palustris*). Its upper shell is oval, and is covered with many plates, which are deeply impressed with numerous lines, giving a rough and uneven appearance. They are of a dull, ash-brown color, sometimes approaching black, unequal in size, and varying in shape, some being six-sided, a few oblong, while others are triangular. The under shell is smooth, and varies in color from reddish orange to pale yellow. The neck is short and thick, and the head and limbs are of a dark brownish color, covered with black spots. These terrapins have a range from Massachusetts to the Gulf of Mexico, and are found in all the bays and inlets along the Atlantic coast. But those found in the Gulf of Mexico are much coarser in shell and meat, possessing a somewhat larger head, those of Texas being particularly gross. The farther north the habitat of the salt-water terrapin, the more delicate and highly flavored is its flesh. Instances have been known of "diamond-backs" being caught at Hell Gate, East river, N. Y. At Shrewsbury and at other places on the New Jersey coast they were abundant in the winter of 1885–'86. The dealers have divided the "diamond-back" into three classes, based on the difference in size and sex. The largest are the females, which are called "cows," the length of whose under shell is six inches or more. The largest cow ever found measured nine and a half inches in length. As a rule, only "full-count" terrapins—that is, terrapins of not less than six inches in length—contain eggs. These eggs are the tidbits of the epicure, and for this reason the price of cows varies from $15 to $50 a dozen; extra large cows, when scarce, bringing $60 a dozen. Frequently a large cow will have 100 eggs. To distinguish the "full counts" the dealers use a little notched stick, with which they measure the under shell. Unless the shell overlaps the end of the stick, the terrapin does not pass inspection. The second class are about five inches in length, are called "heifers," and command a price of from $3 to $8 a dozen. The smallest of all are the males or "bulls," measuring only four and a half inches on the under shell, and are distinguished from young terrapin by a slight groove, which extends lengthwise on the under shell. These are only edible when used in soups, and bring about $3 a dozen. The terrapins that reach our markets are either freshly caught or are from the pens where they have been retained. The former are the most delicious. They are found during the winter hibernating in the mud, and are then very fat and juicy. At the approach of cool weather the terrapins leave the deep channels of the bays and creeks, and bury themselves in the muddy shore banks. A favorite bedding-place is on a shelving point at the intersection of a narrow drain with some wide creek. They bury themselves from six inches to five feet below the surface. Although hidden from view, they leave signs that lead to their detection. At several localities where terrapins are numerous, persons make a living by capturing them. At low tide the terrapin-hunter searches the marshes with a spear-shaped stick to probe the likely places. Either an indentation on the surface of the mud or a tiny air-hole gives him the clew. Four or five terrapins are generally found in one bed, of which two or three are females. The labor incidental to terrapin-hunting is very great, and the most expert hunter is lucky to average two "full counts" a day during the early season. During the cold weather terrapins never attempt to bite, although they are restless when confined where the temperature is warm. If it is too hot, they die. On the other hand, if properly packed in a barrel with sea-grass in autumn, and kept in a cool cellar, they will hibernate until warm weather, and under these conditions they lose nothing in weight. The penned terrapins are netted in seines in the large channels during the summer, and are then wary and vicious. Being deprived of their natural food, penned terrapins become tough and lose their high flavor. The pens are constructed on the shores, that the water may flood them at every incoming tide. It was found that terrapins bred while thus penned, and this suggested the idea of artificial culture. It was first attempted at Mobile, Ala., where an immense pen was built. The females bedded on the approach of cold weather, and in the early spring laid their eggs, from 25 to 100. In two or three months the eggs were found to hatch out, and the pen was filled with young terrapins. The success of this undertaking induced others to attempt the raising of terrapins, and pens were constructed at points on Chesapeake Bay, Shrewsbury river, Long Island, and other places. As yet no marketable results have been achieved, on account of the length of time it takes the terrapin to reach maturity. A female must be about ten years old before she will lay. In confinement the terrapin eats crabs, fish, mussels, oysters, and grass. The crab-diet seems to agree with them; but it is probable that fish is not their food when in a wild state, because those that have fed on it became disagreeably fishy in flavor. Some time ago they were found to thrive well on cabbage, lettuce, and water-melon rinds. The penned terrapin can be distinguished from the freshly caught one by the scraped and roughened appearance of the central portion of the under shell, and the small callous spots, made by rubbing, on the hind legs. The annual catch of terrapins is not large, although they are not found to be diminishing in number. The largest quantity of choice terrapins comes from Chesapeake Bay. They are mostly consumed in the four terrapin-eating cities—New York, Philadelphia, Baltimore, and Washington. Many restaurants in these places palm off the red-legged terrapin for the genuine "diamond-back."

TEXAS. State Government. — The following were the State officers during the year: Governor, John Ireland, Democrat; Lieutenant-Governor, Barnett Gibbs; Secretary of State, J. W. Baines; Treasurer, Frank R. Lubbock; Comptroller, W. J. Swain; Attorney-General, John D. Templeton; Land Commissioner, W. C. Walsh; Superintendent of Public Instruction, B. M. Baker; Commissioner of Insurance, Statistics, and History, H. T. Brewster, succeeded by H. P. Bee; State Engineer, James H. Britton. Supreme Court: Chief-Justice, Asa H. Willie; Associate Justices, John W. Stayton and S. Robertson.

Legislative Session.—The Legislature met on Jan. 13, and adjourned on March 30. Of the work of the session a local reviewer says:

> A great many amendments to the penal laws that have long been demanded by the people have passed. What the Legislature has failed to do that is needed amounts to little. Legislation to protect the commerce of the State against the railroads discriminating against Texas cities was certainly needed. The finance measures are a great improvement upon the last Legislature's. Taxes are increased to meet all requirements, and the appropriations are not excessive or extravagant.
>
> The land bill is the best that has ever been passed. It will encourage actual settlers to occupy the school lands, and such lands as are fit only for pasturage will be leased in all probability. It is a straight-out lease law at the fixed rate of five cents an acre, and sales to actual settlers at $2—in both cases to include dry and watered lands. Sales limited to one section, and leases unlimited and for a term not to exceed two years.
>
> The increased penalties for gambling and carrying concealed weapons are expected to work well in small towns and cities.
>
> The Governor vetoed the road bill, which would have probably been very unpopular.
>
> No one expects any benefit from the bucket-shop bill in its present form, as it is considered by good lawyers unconstitutional.

The Governor, after the adjournment, failed to approve the land bill.

A prohibitory amendment passed the House, but failed in the Senate. Several new counties were created.

Finances.—The total State ad-valorem tax in 1884 was $1,029,121.10; total school tax, $735,155.39; State revenue poll, $157,830.15; school poll, $315,664.85; grand total, $2,237,771.49. Add to $588,060,917, the total value of the taxable property, $15,000,000 as the approximate total of assessments for 1884 on lands in unorganized counties owned by non-residents, and the total value of property for 1884 is $603,060,917.

Galveston.—During the commercial year ending Aug. 31, 1885, the great falling off in the cotton-crop had a tendency to restrict trade. It was only near its close that the magnificent corn and small-grain crops harvested, and the promising outlook for cotton, produced a noticeable revival.

The following is the annual cotton statement, Aug. 31, 1885:

		Bales.
Exports to Great Britain		157,648
Exports to France		9,619
Exports to Continent		56,250
Exports to Mexico		7,875
Exports to New York		227,445
Exports to Morgan City		4,859
Exports to other United States ports		6,285
Exports to El Paso for Mexico by rail		4,146
Exports to interior of Texas by rail		3
Stock this day		2,846
Total		476,976
Deduct—		
Receipts from New Orleans	5,124	
Receipts from Indianola	5,519	
Receipts from Corpus Christi and Rockport	41	
Stock this day last year	2,829	
		13,513
Net receipts this season		463,463

On Nov. 13 occurred the most extensive conflagration that has ever visited the city. The flames swept almost from bay to gulf across the island, destroying some of the most elegant residences of Galveston, and reducing to ashes a portion of the city in territorial area about 100 acres, all thickly populated and embracing about forty squares. The fire was confined to the residence portion of the city, composed almost entirely of frame buildings. The loss was estimated at about $1,400,000.

Notwithstanding the fact that the cotton-crop of the State was over 400,000 bales less in 1883–'84 than it was in 1882–'83, the total value of produce exported very nearly reached $100,000,000. The year before values from the same sources reached the total of $119,906,265.

TOOMBS, ROBERT, an American politician, born in Washington, Ga., July 2, 1810; died there, Dec. 15, 1885. His education was begun in the University of Georgia, but before completing the course he went to Union College, N. Y., where he was graduated in 1828. The following year he attended a law course at the University of Virginia, and he was admitted to the bar in 1830, before he was of age, by a special act of the Legislature of Georgia. He entered upon practice in his native town, and soon afterward married Miss Dubois, to whom he was devotedly attached all his life, and who died two or three years ago. As a lawyer, Mr. Toombs was very successful, and accumulated considerable wealth in a few years. In 1836 he served as captain of a company of volunteers in a campaign against the Creek Indians of Alabama. The next year he was elected to the Georgia Legislature, and soon took a prominent position in State politics. He remained in the Legislature until 1844, when he was chosen to represent his district in Congress. He served eight years in the House of Representatives, and in 1853 was elected to the Senate. As Senator, as well as in all other respects, Mr. Toombs was intensely Southern. He believed in the absolute sovereignty of the States, and in the necessity to the South both to maintain and extend slavery in the United States. He made no concealment of his views as to secession, in case the United States Government undertook to enforce its authority against the will of a State; and, after the election of Abraham Lincoln, he advocated secession with all the bitterness and force of his fiery nature, making several violent speeches in Georgia, in which he asserted that the North would no longer respect the constitutional rights of the South, and that secession was the only remedy. Alexander H. Stephens urged Georgia to remain in the Union; but Mr. Toombs urged it to go out, and, mainly owing to his activity and energy, when the State Convention met, the resolution to secede was adopted by a considerable majority. The Senate of the United States expelled him from his seat in that body, March 14, 1861. When the Confederate Government went into operation, Mr. Toombs was appointed Secretary of State; but he preferred to join the army in the field, where, however, he was not especially successful. After the war, he escaped arrest and went to Europe, and while in England was admitted to the bar and practiced law. He returned to his home in Georgia in 1867; but, as he refused to take the oath of allegiance to the United States, he was for the remainder of his life debarred from all rights and privileges of citizenship. He left an estate valued at $500,000 or more.

TURKEY, an empire in southeastern Europe and western Asia. The government is an absolute monarchy, founded on the precepts of the Koran and the Multeka. A constitution, introducing the representative principle, was proclaimed in 1876, but has not been carried into effect. The reigning Sultan is Abdul-Hamid II, born Sept. 22, 1842, who succeeded his brother Murad—deposed Aug. 31, 1876. The executive and legislative authority is exercised under the Sultan by the Grand Vizier in temporal matters, and by the Sheik-ul-Islam, who is the head of the Ulema, or sacred council, in religious matters. The departments of state are directed by a Council of Ministers, presided over by the Grand Vizier. The Cabinet was reconstructed in September after the Roumelian revolution. It is composed of the following members: Grand Vizier, Kiamil Pasha; President of the State Council, Aarifi Pasha; Minister of Foreign Affairs, Said Pasha; Minister of War and Grand Master of Artillery, Ali Saib Pasha; Minister of Marine, Hassan Pasha; Minister of the Interior, Munir Pasha; Minister of Justice, Server Pasha; Minister of Finance, Agop Pasha; Minister of Commerce and Agriculture, Hakki Pasha; Minister of Public Instruction, Munif Pasha; Intendant of Evkafs, Zihmi Effendi; Minister of Public Works, Zahdi Effendi. The Minister of Marine is the same as in the late Cabinet; Ali Saib Pasha, who was Grand Master of Artillery, replaced Ghazi Osman Pasha as Minister of War; Munir Pasha was transferred from the Ministry of Finance. Said Pasha was taken from his post of ambassador at Berlin, Essad Pasha, the ambassador at Paris, being transferred to that capital, and Adhem Pasha, the late Minister of the Interior, sent to Paris. The Sheik-ul-Islam is Ahmed Essad Effendi. Kiamil Pasha, the new Grand Vizier, was previously Minister of the Evkafs. He was born in Cyprus, and acquired a familiar knowledge of English while with an Englishman in Cairo for several years. The dismissal of Said Pasha is said to have been primarily due to the enmities he had excited by detaching the financial agents in the provinces from their subservience to the governors-general and making them directly dependent on the Ministry of Finance.

Area and Population.—The area and population of the immediate possessions and tributary states of the Turkish Empire are, according to the most recent returns and estimates, as follow:

POSSESSIONS.	Square kilometres.	Population.
Immediate possessions in Europe...	165,438	4,500,000
Autonomous province of Eastern Roumelia........................	35,900	815,946
Bulgaria, tributary state............	63,972	2.007,919
Bosnia and Herzegovina............	61,065	1,336,091
Sandjak of Novi-Bazar........	....	168,000
Total European possessions....	326,375	8,827,956
Immediate possessions in Asia......	1,890,000	16,133,000
Samos, tributary principality.......	468	40,513
Total Asiatic possessions.......	1,890,468	16,173,513
Vilayet of Tripoli......................	1,033,000	1.000.000
Egypt, a protectorate..............	1,021,354	6,817,265
Total African possessions......	2,054,354	7,817,265
Ottoman Empire..................	4,271,197	32,818,734

The population of Constantinople, the capital, in 1885, was 873,565. The next most populous cities are Smyrna and Damascus, in Asiatic Turkey, with about 150,000 each.

Commerce.—The total imports of 1884–'85 were valued at 1,975,784,000, the exports at

1,239,020,000 piasters, as compared with 2,010,243,000 and 1,096,449,000 piasters respectively in 1883-'84 (1 piaster = 4·3 cents). Of the imports, 44 per cent. came from Great Britain, 20 per cent. from Austria, 14 per cent. from France, and 6 per cent. from Russia; Italy, Persia, Greece, Roumania, and the United States coming next in the order of importance. Of the exports, 37 per cent. went to France and 36 per cent. to Great Britain, Egypt taking 5 per cent., and Russia and Greece a little over 3 per cent. each. The imports from the United States amounted to 28,948,000 piasters; the exports to the United States, 11,392,000 piasters.

The navigation returns at the port of Constantinople show an aggregate tonnage of 6,202,956, those of Smyrna 1,071,713, those of Salonica 881,828. The merchant marine, in 1879, numbered 220 sailing-ships, of 34,500 tons, and 11 steamers, of 3,350 tons, engaged in ocean commerce.

Communications.—The total length of railroads open to traffic in European Turkey is 1,432 kilometres; in Asia Minor, 555 kilometres.

The number of letters carried in the mails during 1882 was 3,003,000 in European Turkey.

The length of telegraph lines was 23,388 kilometres; of wires, 41,688 kilometres—all belonging to the Government. The number of paid internal dispatches was 133,212; of international, 137,168; the receipts were $85,499; the operating expenses, $96,244.

Finances.—The financial accounts of the Turkish Empire invariably show a large deficit; yet, by withholding a part or the whole of the salaries of functionaries and military officers, the Government has managed to avoid actual bankruptcy. The total revenue for 1883-'84 is estimated at 16,313,006 Turkish pounds—about $71,451,000. The approximate amount of the expenditures, apart from the service of the debts, is estimated at 12,036,011 Turkish pounds. The new loan of 23,000,000 francs at 7 per cent. was obtained from Baron Hirsch in December, 1885, to meet the expenses of mobilization. A new contract in regard to the trunk railroads was made in order to obtain the loan. The company is to pay the Government, as rent for the railroads, 45 per cent. of the excess of the gross receipts per kilometre per annum, and in all cases at least 1,500 francs per kilometre. This assures to the Government an income of at least 2,000,000 a year. The interest on the new loan is secured on this revenue.

The annual report of the Council for the Administration of the Ottoman Debt makes the total capital amount in 1885 to £92,225,827 sterling, of which £82,346,767 represent the converted debt, £6,570,447 the registered debt, and £3,308,613 other obligations. The receipts from the hypothecated revenues in 1884-'85 were 225,986,319 piasters; the expenses of administration, 25,167,591; leaving a net sum of 1,984,616 pounds Turkish (£1 T. = $4.38). Other receipts guaranteed by the Porte for the service of the refunded debt are the subvention of Eastern Roumelia, fixed at 245,000 pounds—a sum equivalent to the Cyprus surplus of 130,000 pounds a year, the equivalent of the Bulgarian tribute of 100,000 pounds, and the equivalent of the revenue of Tumbeki of 50,000 pounds a year. Other loans were already secured on the Egyptian tribute of 765,000 pounds previous to the recent arrangement.

The Army.—The Turkish army has been partially reorganized on the plan adopted in 1880. The *nizam*, or regular army, is completely organized. The first ban of the *redif* lacks the cavalry and a portion of the artillery, while the troops of the second ban exist only on paper. Every Mohammedan is liable to serve in the regular army, except sole supporters of families; but exemption can be purchased for about $250. Christians pay an exemption-tax. The country is divided into seven military districts with headquarters respectively at Constantinople, Adrianople, Monastir, Erzingian, Damascus, Bagdad, and Sanaa. Each district furnishes an army corps to the *nizam* and one to each ban of the *redif*, except the Yemen district, with headquarters at Sanaa, which furnishes only a corps in the *nizam* for local service. On Jan. 1, 1885, the Turkish army comprised 264 battalions of infantry, 189 squadrons of cavalry, 140 field batteries, 8 battalions of fortress artillery, 19 battalions of engineers, 5 battalions of train, 3 battalions of firemen, 11 battalions of laborers, and one company of telegraphists. Its total strength was 158,959 men, including about 9,900 officers, with 23,025 horses and 3,202 pieces of artillery. The *redif* troops already organized at the beginning of 1885 would raise the effective force to about 310,000 men, and a call of the *mustahfiz*, or final levy, was estimated, to give 120,000 more men trained to arms. The investigation carried out by the War Department at the time of the partial mobilization in the autumn showed that Turkey possessed 450,000 effective troops, and in case of need could place in the field probably 300,000 more.

The Navy.—In 1885 the Turkish Government had 15 large ironclads and 46 unarmored monitors and gun-boats and other vessels. There were three sea-going frigates, the largest having 12-inch armor at the water-line and carrying twelve 18-ton, and three 6½-ton guns, the two others having 10- and 8-inch plates respectively. Next come 4 sea-going corvettes, and then 8 corvettes for coast-defense. The navy contained 3 torpedo-boats. The *personnel* comprised 927 officers, 30,000 sailors, and 9,463 marines.

War Preparations.—The Turkish Government continued the mobilization begun after the Roumelian revolution of Sept. 18 (see BULGARIA) until the end of the year. At the end of October it had on the northern frontier a force of 40,000 men and 54 guns around Adrianople; in the center, from Strumitza to Ueskub, 48,000 men with 90 guns; and in the west, in the vicinity of Prishtina, 15,000 men and 90 guns. The troops guarding the Greek frontier were strengthened with *redifs* from Asia till they numbered 22,000 men with 36 guns. The *mustahfiz* in Albania and Macedonia were called out, and 60,000 Martini-Henry rifles were distributed among them. The Government had in the summer bought of Krupp 7 very heavy guns for the defense of the Dardanelles and Bosporus, 22 large fortress-guns, and 400 field-pieces and mountain-cannon. There were now delivered 150 field-guns. The mobilization of the army on so large a scale was undertaken in order to be prepared for all eventualities, and for the purpose of demonstrating to Europe that the military power of Turkey was as formidable as ever.

In the latter part of December the Fifth or Syrian Army Corps was ordered to be mobilized to garrison the capital. The soldiers already under arms were called away from their homes when it was harvest-time in Asia Minor, where the impoverishment resulting from the Russian War was just beginning to give place to renewed prosperity; and they suffered privations and exposure in the inclement season as severe as they would have to endure in actual war. The officers and soldiers complained bitterly that they were not sent against the Bulgarians.

Cretan Troubles.—On May 16, 1885, Photiades Pasha, Governor-General of Crete, resigned in consequence of a vote in the Assembly in which the Mussulmans and the majority of the Christian deputies joined in demanding his resignation. He was requested to remain until his successor arrived; and the delay in selecting a man for the post caused dissatisfaction among the Cretans; and when the Sultan finally chose Savas Pasha, formerly Minister of Foreign Affairs, they were displeased. He nevertheless entered upon his functions in the beginning of June, and, after some disturbance, was accepted by the House of Deputies, on his signing a declaration that he would govern strictly in accordance with the provisions of the organic statute.

Disturbances in Albania.—The insurrection in Albania was renewed in March. Two agitators of the tribe of the Lyumese, who acted as spokesmen for the Mussulman population, were arrested and taken to Prisrend by the Turkish soldiery. Their whole tribe thereupon rose and marched upon Prisrend; but they were beaten after a sharp skirmish by the Ottoman troops, who pursued them and dislodged them from the mountain defile in which they took refuge. The agitation spread into other parts of Albania. Massacres occurred in the Bielopolje district, and Osman Pasha was sent with three regiments to punish the perpetrators in July. The Albanian brigand Sul Huppi extended his depredations from the vilayets of Kossovo and Monastir into the vilayet of Salonica, and the *redifs* were called out to defend the town of Tirana from his band of 700 men. The Turkish garrisons in Albania were augmented, and energetic action was taken by Veissel Pasha to crush the revolt. A large number of Arnants were killed in encounters with the Turkish troops, and several of their leaders were captured and hanged. In the north a league was formed to resist all attempts at innovation on the part of the Government. The disturbances continued until the outbreak of the Roumelian revolution. Then the Mohammedan Albanians, who were chiefly concerned in the insurrectionary proceedings, showed a desire to fight for the Sultan against a common foe. In a conference between Veissel Pasha and the rebel chiefs a truce was arranged. In October the Turkish commander reported that he was able to spare a large part of his force, and that a considerable proportion of the late rebels were desirous of joining the Turkish standard in order to fight against the Bulgarians.

The Conference of Ambassadors.—On Nov. 5 the representatives of the great powers met at Pera to consider the Bulgarian question. Russia was the first to suggest the conference, but found it difficult to get the powers to agree to the bases proposed by her. The Czar's Government was desirous of either undoing the revolution, or accepting the accomplished fact, but deposing Prince Alexander. Germany and Austria wished to act in concert with Russia in order to preserve the three emperors' league, but England, and to a certain extent France, would not enter the conference on these conditions. Finally, accord was established on the bases of the formal restoration of the *status quo*, a personal union of Bulgaria and Eastern Roumelia under Prince Alexander, a common code of laws for the two states, to be framed by a European commission, but separate military budgets, the preservation of the Roumelian militia organization, and the interdiction of the Bulgarian military forces from entering Eastern Roumelia. Lord Salisbury, while accepting the *status quo ante* as the point of departure, entered the conference with a reservation as to the method of carrying out the decisions of the conference, such as by the dispatch of Turkish troops to Roumelia, and stipulated that the deliberations should be restricted to the Bulgarian question.

In the third sitting, held Nov. 9, all the powers agreed to a declaration in favor of the restoration of the *status quo ante* in conformity with the Treaty of Berlin and under the suzerainty of the Sultan. The British plenipotentiary, Sir William White, caused a clause to be inserted stipulating that the means adopted should be sanctioned by his Government. The Marquis de Noailles made a similar reservation on behalf of the French Republic. The British ambassador proposed that an international commission should proceed to Philippopolis to carry out the resolution.

Russia and Austria, from the opposite standpoints of their rival and antagonistic aims, were both interested in re-establishing the *status quo ante* pure and simple. This solution would tend to restore Russian control in Bulgaria. It would convince the Bulgarians that the union could not be consummated except under Russian auspices, at the hour and in the manner ordained by the St. Petersburg authorities, and would render it easy to dethrone the Bulgarian prince, who had committed himself to independent national action and to counteract the nationalist and anti-Russian influences. Austria-Hungary was pledged to Servia to restore the *status quo* or to secure for her a territorial indemnity. It was not a part of Austrian policy to aggrandize Servia at the expense of Turkey, even if it could be accomplished without a general conflagration by the united pressure of the powers upon the Porte. The Servian war was a welcome event to the St. Petersburg diplomatists, because the expected defeat of the Bulgarians would end the dead-lock in the conference and bring about the deposition of Prince Alexander and the restoration of the *status quo*, or its confirmation under conditions favorable to Russian influence. Germany, in the interests of peace, and in order to preserve the league between the three empires, seconded all the proposals of Russia, and labored to keep Russian and Austrian action from diverging. Italy supported the views of the German Chancellor. England was the only champion of the Bulgarian prince and of the *fait accompli.* France supported most of the British proposals. Russia and Germany urged the Porte to interfere directly in Eastern Roumelia. When the Bulgarians pursued the Servian army over the border and captured Pirot, Count Khevenhüller, the Austrian plenipotentiary, threatened military intervention, not without a previous understanding with Russia.

The conference was resolved into a dispute between M. de Nelidoff, the Russian, and Sir William White, the English ambassador. The proposals of the Russian representative were backed up by the German, Austrian, and Italian ambassadors, while the French ambassador gave a partial support to the English views. In the earlier sittings, M. de Nelidoff urged that the restoration of the *status quo* should be decreed by the powers in agreement, while Sir W. White insisted that the initiative should be taken by Turkey. The British ambassador proposed that an international commission should be sent to Philippopolis to consult the wishes of the Roumeliots.

A protocol was drawn up on Nov. 21, providing that a commissioner of the Turkish Government should be sent to Eastern Roumelia, accompanied by delegates of the powers, and subsequently an international commission, charged with finding out the desires and grievances of the Roumeliot people. The protocol treated of the appointment of a governor-general, in accordance with the provisions of the Berlin Treaty. This protocol was discussed again on Nov. 21, when Sir W. White declared that England did not recognize the Berlin Treaty as binding, because its individual stipulations had been broken in many points. He moved that the clause relating to the governor-general should be left out, to provide for the case of the Bulgarian union's being recognized and no governor appointed. Baron Calice and M. de Nelidoff, on behalf of the Continental powers, insisted upon retaining the provision for a governor-general, in accordance with the Berlin Treaty, which had been accepted as the basis of the conference. France, as well as the three empires and Italy, was in favor of signing the protocol in the form rejected by England. A last sitting, which was merely formal, was held Nov. 28. The empires then united in a course of action independent of England. Herr von Radowitz, the German ambassador, presented, on their behalf, a note to the Sultan, suggesting the sending of a commissioner and the dispatch of Ottoman troops to Eastern Roumelia; the absence of the Bulgarian and Roumelian troops in the north affording a favorable opportunity. The Turkish Government, pursuing the non-committal policy it had followed from the beginning, decided on a cautious and waiting course, intermediate between the action urged by the three emperors' league and that suggested by England. Djevdet Pasha was appointed commissioner to Eastern Roumelia, but instead of his proceeding at once to Philippopolis, to assert the authority of the Sultan, two deputy commissioners were sent on a mission of investigation.

On Nov. 30 the Porte issued an appeal to the people and the officials of Eastern Roumelia, calling upon them to repair the errors into which they had been led by interested persons, and return to their allegiance to their lawful sovereign. The proclamation assured them of the good-will of the Sultan, and promised a general amnesty. At the time when the Turkish deputies entered Roumelia, a formidable military demonstration was made on the frontier by the massing of a large force at Mustafa Pasha. The Roumeliots were intensely excited over the action of the Porte, but were warned by their leaders not to provoke the threatened armed intervention by any show of violence or hostility to the Sultan's commissioners. The two delegates, Lebib Effendi and Gadban Effendi, were sent to Eastern Roumelia to sound the population and ascertain what reception would be given to an imperial commissioner. Contrary to the reports circulated by the enemies of Bulgarian union and accepted at Constantinople, the revolution was found to be, not the work of a few political adventurers, without earnest popular support, but a genuine national movement. Reports had been spread telling of disaffection and insubordination in the Roumelian militia. The Russian consular agents intrigued in every way to stir up discontent, and to bring about the fall of the prince. Before the arrival of the Turkish delegates, it was related that the Roumeliot women entered the Assembly with clubs and beat the deputies, demanding that they should give them back their husbands. The Turkish emissaries reported that these stories were false. The Roumeliot soldiers, at the close of the campaign against the Servians, begged the prince not to desert their cause and renounce the union. The Russian diplomatists urged the Turkish Government to intervene and re-establish the former government in Philippopolis, yet were anxious to place limitations on the military action of Turkey. The English defended the right of Turkey to act independently, and exerted their influence to induce the Porte to recognize the Bulgarian union. The proposal of a personal union and the appointment of Prince Alexander to the governorship of Eastern Roumelia was from England. The conference separated when Austria-Hungary intervened diplomatically in the war between Bulgaria and Servia, without having come to any practical conclusion. It was not formally dissolved, but adjourned with the understanding that it would meet again whenever there was a prospect that the question would be advanced by a renewal of the deliberations. The Turkish envoys in Eastern Roumelia were received kindly, but were impressed with the hopelessness of restoring the old order of things. One went as the Turkish representative at Sofia and the other returned to Constantinople. The success of the Bulgarian arms wrought a change in the diplomatic situation. The reasons on which Russia based her opposition to the union were dispelled by the earnestness and valor displayed by the Bulgarians and Roumeliots. The Russian Government was no longer able to hold out against the current of popular sympathy for the Bulgarians in Russia. The change in Russian sentiment was reflected in the other Continental cabinets that followed the lead of Russia in the Bulgarian question. The plans of the Turkish Government were altered accordingly. Instead of sending Djevdet Pasha as the representative of the sovereign authority of the Sultan in Eastern Roumelia, the Porte dispatched Madjid Pasha as an intermediary to negotiate an arrangement with Prince Alexander. The Prince of Bulgaria, not perceiving the difference at first, refused to receive the Turkish envoy, but when the character of his office and the purpose of his mission were understood, Alexander readily entered into the negotiations. The prince was offered the governor-generalship under the conditions laid down in the Berlin Treaty, and upon his accepting it he was regularly nominated by the Sultan. He was considered to have purged himself of contumacy, and placed himself in a correct attitude by his declarations of submission and allegiance to the Sultan, and by the recall of Bulgarian troops from Roumelia. Great Britain, the power which, deserted by France and entirely isolated, had broken up the conference and provoked the anger of the Continental league that pretended to control by mutual agreement between the three empires the destinies of the Balkan lands, was now, as in the Berlin Conference, the master of the situation. By guarding the interests of Turkey, and standing up for the independence of Bulgaria, she regained her lost influence in Constantinople, and won a victory over Russia as important and far-reaching in its effects as when she dictated the terms of the Treaty of Berlin. The negotiations between the Bulgarian and Turkish Governments resulted in an agreement more favorable to Bulgarian and Turkish interests, and more hostile to Russia, than anything proposed at the conference. The Czar, in order to recover the affection of the Bulgarian people, issued a manifesto praising their gallantry. The Russian Government made preparations to give military assistance to Bulgaria, in consequence of Austria's promise of aid to Servia. Austria and Russia are supposed to have made a secret agreement before the Servian war, whereby Russia would be permitted to occupy Bulgaria in case the Servians carried the war into Bulgarian territory, and Austria to send an army corps into Servia if the Bulgarian forces crossed the frontier. When Turkey intervened in the war, the Russian Cabinet sent a note to Said Pasha, the Turkish Prime Minister, protesting against such action. The menaces of Greece threatened to prolong the crisis and prevent a settlement on the terms advocated by Great Britain, which were that Servia should simply accept the Bulgarian union. Greece received no encouragement, though France gave a platonic support to her pretensions to the whole of the territory awarded to her by the Berlin Treaty. Finally, Great Britain threatened to intervene if Greece attacked Turkey, and a British squadron was sent to hold guard over the Greek fleet in the Piræus.

The agreement finally reached between the Bulgarian Government and the Porte confirms the appointment of Prince Alexander as permanent Governor-General of Eastern Roumelia, and establishes a military alliance between Turkey and Bulgaria. Prince Alexander will hold the office of governor on the bases of the Treaty of Berlin, so long as he preserves a correct and faithful attitude toward his sovereign, and devotes his efforts to the maintenance of order and security in the province, and to the well-being of the Roumeliot people. In case of a foreign invasion of Bulgaria or Eastern Roumelia, Ottoman troops will be sent to operate with the Roumelian or Bulgarian troops for the defense of those territories under the command of the prince. If other provinces of European Turkey are attacked, the prince will send troops to act under the orders of the Ottoman generals. The Russian Government objected to the military convention in the strongest manner, but approved the other articles of the treaty. The Porte maintained its right to conclude a military treaty with a vassal of the Sultan, and denied that the firman appointing Prince Alexander Governor of Eastern Roumelia was an infringement of the Treaty of Berlin, since the appointment to be effective must be ratified by the powers. The Mussulman villages in Eastern Roumelia are to be administered under the control and supervision of a commissioner of the Turkish Government, whose appointment will be subject to the approval of Prince Alexander.

The Agreement with England on the Egyptian Question.—Sir Henry Drummond Wolff, who was sent by the Salisbury Cabinet to negotiate with the Porte a settlement of the points of difference with respect to Egypt, finally arranged an understanding on the basis of a clear recognition of the Sultan's suzerain rights. The affairs of Egypt are intrusted to the joint supervision of an English and a Turkish commissioner. The finances, the judicial system, and the army are to be reorganized under their direction, and when that is accomplished the British troops will evacuate Egypt. The southern frontier of Egypt is to be fortified. Sir Drummond Wolff went to Egypt as the English special commissioner, and Mukhtar Pasha was appointed special commissioner of the Porte.

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UNITED BRETHREN. The statistical returns of this Church, as reported to the General Conference in May, give the following numbers: Of bishops, 5; of traveling preachers, 1,347; of local preachers, 920; of members, 168,573; of Sunday schools, 3,228, having a total membership of 195,022 persons. The 2,454 houses of worship and 436 parsonages are valued at $3,603,251. The amount collected for all church purposes in 1884 was $842,470. The educational institutions consist of one theological seminary, ten colleges, and ten seminaries, academies, and schools of a higher grade, which returned 128 teachers and 2,088 students, with an aggregate of $342,443 of endowment funds, and buildings and grounds valued at $372,470. The agent of the Publishing House at Dayton, Ohio, reported that the cash receipts of the establishment during the past four years had exceeded $500,000, while the net profits of the business had been $61,011.

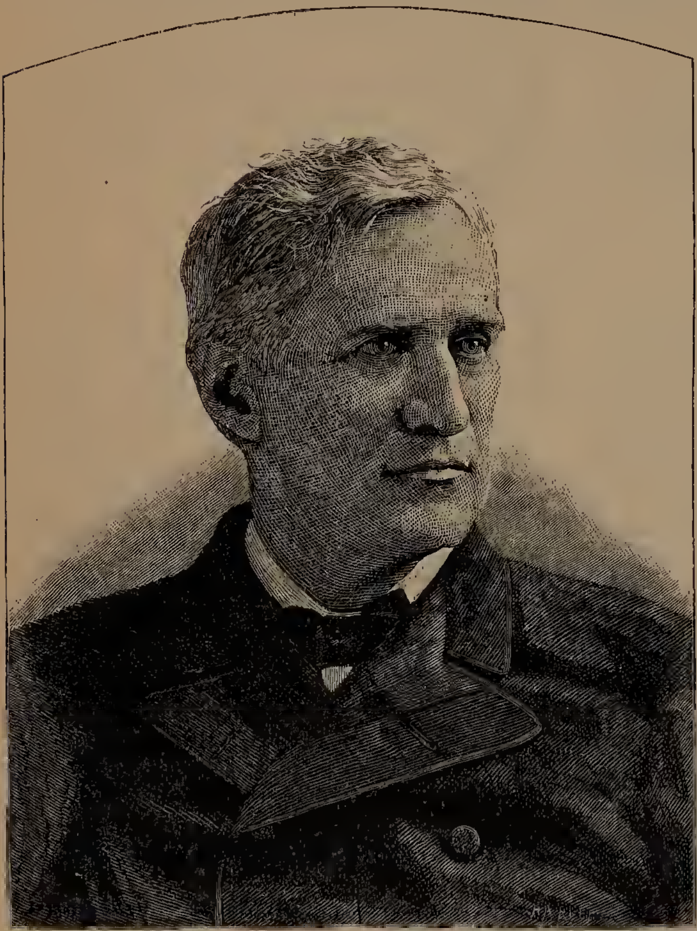
The Nineteenth General Conference of the United Brethren Church met in Fostoria, Ohio, May 14. Forty-seven conferences were represented by 121 delegates. The five bishops presided by turns. The most important subject of discussion was that relating to membership in secret societies, which is forbidden by the constitution of the Church. Efforts have been making for sixteen years to have the rule modified, without success, in securing the passage of the proposition through the stages required to enact a constitutional amendment. A party in the Church contended that these steps were not required, because the constitution itself was only a creature of a single General Conference, which had never been directly voted upon by the people, and had therefore no more force than an ordinary statute repealable at will. The bishops in their address recommended that the General Conference determine whether the disposition of the matter is not still within its hands, and if it find that to be the case, that it "transfer the whole subject from the realm of constitutional law to the field of legislative enactment, which would be to expunge the whole question from the constitution." The subject was disposed of by appointing a commission to prepare a revision of the constitution and submit the same to a vote of the Church; while the rule against secret societies was modified so as to read:

> A secret combination, in the sense of the constitution, is a secret league or confederation of persons holding principles and laws at variance with the Word of God, as evidenced in individual life, and infringing upon the natural, social, political, or religious rights of those outside its pale. Any member or minister of our Church, found in connection with such combinations, shall be dealt with as in other cases of disobedience to the order and discipline of the Church, as found in the pages of the Discipline.

UNITED STATES. The New Administration.—Before going to Washington to enter upon the duties of the office of President, Mr. Cleveland had consultations at Albany with several prominent leaders of his party, including Vice-President-elect Hendricks, Speaker Carlisle, ex-Speaker Randall, and Senators Gorman, of Maryland; Garland, of Arkansas; and Lamar, of Mississippi. He also visited Mr. S. J. Tilden, at Greystone-on-the-Hudson. In reply to a letter signed by several members of Congress, on the subject of silver coinage, he sent the following, which was published on Feb. 27:

> *To the Hon. A. J. Warner and others, members of the Forty-eighth Congress.*
>
> GENTLEMEN: The letter which I have had the honor to receive from you invites, and indeed obliges, me to give expression to some grave public necessities, although in advance of the moment when they would become the objects of my official care and partial responsibility.
>
> Your solicitude that my judgment shall have been carefully and deliberately formed is entirely just, and I accept the suggestion in the same friendly spirit in which it has been made. It is also fully justified by the nature of the financial crisis which, under the operation of the act of Congress of Feb. 28, 1878, is now close at hand. By a compliance with the requirements of that law all the vaults of the Federal Treasury have been and are heaped full of silver coins, which are now worth less than 85 per cent. of the gold dollar prescribed as "the unit of value" in section 14 of the act of Feb. 12, 1873, and which, with the silver certificates representing such coin, are receivable for

all public dues. Being thus receivable, while also constantly increasing in quantity at the rate of $28,000,000 a year, it has followed, of necessity, that the flow of gold into the Treasury has been steadily diminished. Silver and silver certificates have displaced and are now displacing gold, and the sum of gold in the Federal Treasury now available for the payment of the gold obligations of the United States, and for the redemption of the United States notes called "greenbacks," if not already encroached upon, is perilously near such encroachment. These are facts, which, as they do not admit of difference of opinion, call for no argument. They have been forewarned to us in the official reports of every Secretary of the Treasury from 1878 till now. They are plainly affirmed in the last December report of the present Secretary of the Treasury to the Speaker of the present House of Representatives. They appear in the official documents of this Congress and in the records of the New York Clearing-House, of which the Treasury is a member, and through which the bulk of the receipts and payments of the Federal Government and of the country pass.



THOMAS FRANCIS BAYARD,
Secretary of State.

These being the facts of our present condition, our danger and our duty to avert that danger would seem to be plain. I hope that you concur with me and with the great majority of our fellow-citizens in deeming it most desirable at the present juncture to maintain and continue in use the mass of our gold coin, as well as the mass of silver already coined. This is possible by a present suspension of the purchase and coinage of silver. I am not aware that by any other method it is possible. It is of momentous importance to prevent the two materials from parting company; to prevent the increasing displacement of gold by the increasing coinage of silver; to prevent the disuse of gold in the custom-houses of the United States in the daily business of the people; to prevent the ultimate expulsion of gold by silver.

Such a financial crisis as these events would certainly precipitate, were it now to follow upon so long a period of commercial depression, would involve the people of every city and every State in the Union in a prolonged and disastrous trouble. The revival of business enterprise and prosperity so ardently desired and apparently so near would be hopelessly postponed. Gold would be withdrawn to its hoarding-places, and an unprecedented contraction in the actual volume of our currency would speedily take place. Saddest of all, in every workshop, mill, factory, store, and on every railroad and farm, the wages of labor, already depressed, would suffer still further depression by a scaling down of the purchasing power of every so-called dollar paid into the hand of toil. From these impending calamities it is surely a most patriotic and grateful duty of the representatives of the people to deliver them.

I am, gentlemen, with sincere respect, your fellow-citizen,

GROVER CLEVELAND.

ALBANY, *Feb.* 24, 1885.

Mr. Cleveland left Albany on the evening of March 2, and arrived in Washington the following morning. The inauguration on the 4th was attended by more than the usual military and civic display. Before taking the oath of office, which was administered by Chief-Justice Waite of the Supreme Court, the President-elect delivered his inaugural address from a stand erected at the east front of the Capitol. (See page 258 of this volume.)

On the following day the names of the members of the Cabinet were submitted to the Senate in special session, but immediate confirmation was prevented by an objection from Senator Riddleberger, of Virginia. The appointments were as follow: Secretary of State, Thomas F. Bayard, of Delaware; Secretary of the Treasury, Daniel Manning, of New York; Secretary of War, William C. Endicott, of Massachusetts; Secretary of the Navy, William C. Whitney, of New York; Secretary of the Interior, L. Q. C. Lamar, of Mississippi; Postmaster-General, William F. Vilas, of Wisconsin; Attorney-General, Augustus H. Garland, of Arkansas.

THOMAS FRANCIS BAYARD was born in Wilmington, Del., Oct. 29, 1828, his father being James A. Bayard, at one time a United States Senator. After being carefully educated in private schools, he was placed for a time in a mercantile house in New York. On the death of his elder brother, in 1848, he returned to Delaware, studied law, and was admitted to the bar in 1851. He was United States District Attorney in 1853, but the following year resigned to go to Philadelphia, where he was a partner of William Shippen until 1858. He then returned to Wilmington, and in 1861 was a prominent speaker at a peace meeting held in Dover. He was first elected to the United States Senate in 1869, and was still a Senator when selected as the leading member of Mr. Cleveland's Cabinet. He was a member of the Electoral Commission of 1876–'77, and both in 1880 and 1884 was regarded as a possible candidate for the presidency.

Daniel Manning was born in Albany, N. Y., in August, 1831, and began life at an early age as a printer's apprentice. He advanced from that position in the office of the Albany "Atlas" (subsequently merged in the "Argus"), until he became the editor-in-chief of the "Argus" in 1873, occupying successively the places of foreman of the composing-room, manager of the mechanical department, reporter of legislative proceedings, and associate editor. He also became a considerable owner in the paper, and his position brought him into relations with the prominent politicians of his party in New York. He was for some years a director in several corporations, and in 1882 became President of the National Commercial Bank at Albany. He took an active part in the politics of his State, being for several years chairman of the Democratic State Committee, and was credited with controlling the State delegations in the National Conventions of 1880 and 1884.

William Crowninshield Endicott was born in Salem, Mass., in 1827. He was graduated at Harvard College in 1847, admitted to the bar in 1850, and practiced his profession for some years in Salem, and served as a member of the Common Council of that city. From 1858 to 1863 he was City Solicitor, and also president of a bank. He was appointed Judge of the Supreme Court of Massachusetts in 1873, and served nine years, after which he resumed his law practice, living in the suburbs of Boston. Previous to 1860 he was connected with the Whig party. In 1884 he was Democratic candidate for Governor of Massachusetts.

William C. Whitney was born in Conway, Mass., in 1839, and was a son of Gen. James S. Whitney, a prominent Massachusetts Democrat. He was graduated at Yale College in 1863, and, after studying at Harvard Law School, entered the office of Judge Abraham R. Lawrence in New York. He became connected as counsel with several insurance companies and other corporations. He was defeated as a candidate for District Attorney of New York in 1872, but in 1875 was appointed Counsel to the Corporation, an office which he held until 1882.

Lucius Quintus Curtius Lamar was born in Putnam County, Ga., in September, 1825, was graduated from Emory College at the age of twenty, and admitted to the bar in 1847. Two years later he became Professor of Mathematics in the University of Mississippi, but after holding the chair one year returned to Georgia and opened a law office at Covington. He was elected to the Legislature in 1853, but a year later returned to Mississippi and settled on a plantation in Lafayette County. He served in the Thirty-fifth and Thirty-sixth Congresses, but resigned in 1860 and took part in the Secession Convention of his State. He served in the Confederate army as a colonel, and was sent on a mission to Russia in 1863 by Jefferson Davis. After the war he was Professor of Political Economy and Social Science in the University of Mississippi, and was elected to the Forty-third Congress. He first entered the United States Senate in 1877, and was reelected in 1882.

William Freeman Vilas was born in Chelsea, Vt., July 10, 1840, being the son of Judge Levi B. Vilas, who removed to Wisconsin and settled at Madison in 1851. He was graduated at the State University of Wisconsin, and then studied at the Albany (N. Y.) Law School, was admitted to the bar in 1860, and began practice in Madison. He entered the military service as a captain of volunteers in 1862, and had advanced to the rank of colonel when, in August, 1863, he resigned and returned to the practice of his profession. His first prominence in national politics was as chairman of the Democratic National Convention in 1884.

Augustus H. Garland was born in Covington, Tenn., in June, 1832, but his parents removed the next year to Arkansas. After completing his education, he entered upon the practice of law at Washington, Ark., but subsequently removed to Little Rock. He was a Whig in politics, and in 1860 was a candidate for elector on the Bell-Everett ticket. After his State went into the secession movement, he was chosen to the Provisional Congress at Montgomery, which framed the Confederate Constitution, and served afterward in the Congress of the Confederacy. After the war he resumed the practice of law at Little Rock, and was chosen to the United States Senate in 1867, but was not permitted to take his seat. He was elected Governor of Arkansas in 1874, and at the end of his two-years' term was again chosen to the United States Senate. He was re-elected in 1883.

DANIEL MANNING,
Secretary of the Treasury.

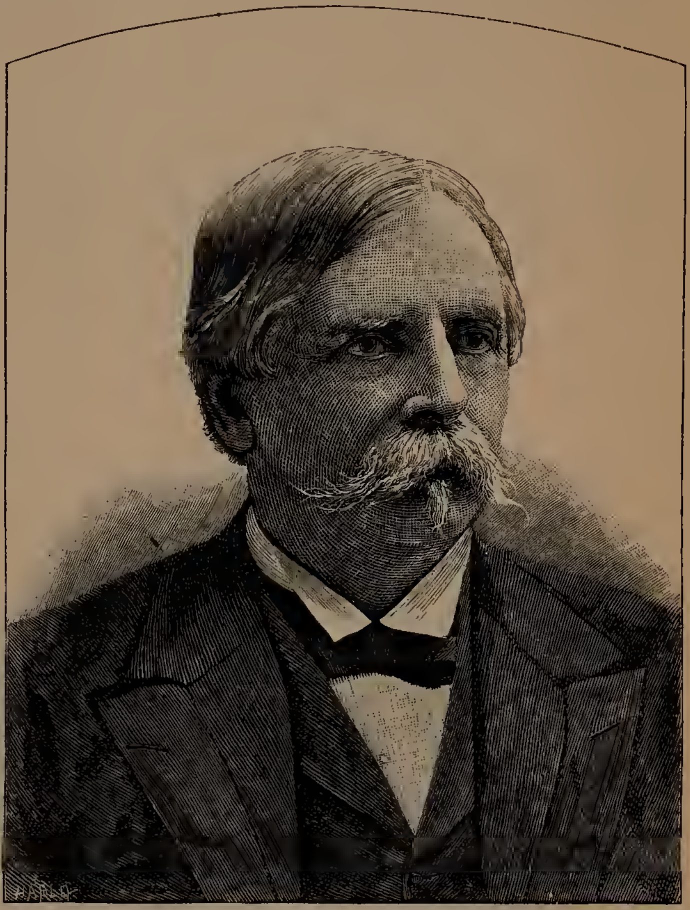
Diplomatic and Consular Appointments.—The important diplomatic and consular appointments under the new Administration were the following: Minister to Great Britain, Edward J. Phelps, of Vermont; Minister to Germany, George H. Pendleton, of Ohio; Minister to France, Robert M. McLane, of Maryland; Minister to Mexico, Henry R. Jackson, of Georgia; Minister to Turkey, Samuel S. Cox, of New York; Minister to Brazil, Thomas J. Jarvis, of North Carolina; Minister to the Argentine Republic, Bayliss W. Hanna, of Indiana; Minister to the Netherlands, Isaac Bell, Jr., of Rhode Island; Minister to Sweden and Norway, Rufus Magee, of Indiana; Minister to the Hawaiian Islands, George W. Merrill, of Nevada; Minister Resident and Consul-General to Portugal, Edward P. C. Lewis, of New Jersey; Minister Resident and Consul-General to Denmark, Prof. Rasmus B. Anderson, of Wisconsin; Minister to Chili, William R. Roberts, of New York; Minister to Peru, Charles W. Buck, of Kentucky; Minister Resident and Consul-General to Hayti, John E. W. Thompson, of New York; Minister Resident and Consul-General to Switzerland, Boyd Winchester, of Kentucky; Minister to Italy, John B. Stallo, of Ohio; Minister to Japan, Richard B. Hubbard, of Texas; Consul-General at London, ex-Governor Thomas M. Waller, of Connecticut; Consul-General at Berlin, Frederick Raine, of Maryland; Consul-General at Vienna, Edmund Jussen, of Illinois; Consul-General at Rome, William L. Alden, of New York; Consul-General at St. Petersburg, Pierce B. M. Young, of Georgia; Consul at Liverpool, Charles T. Russell, of Connecticut.

Among the diplomatic appointments first made were those of Alexander R. Lawton, of Georgia, to be Minister to Russia, and Anthony M. Keiley, of Virginia, to be Minister to Italy. Objection was raised to the eligibility of Mr. Lawton, on the ground that his political disabilities for participation in the rebellion had not been removed. Notwithstanding the official opinion of the Attorney-General that the executive pardon granted prior to the adoption of the fourteenth amendment of the Constitution had operated to remove these disabilities, Mr. Lawton declined the appointment, and George V. N. Lothrop, of Michigan, was appointed to the Russian mission. The appointment of Mr. Keiley was objected to by the Italian Government on account of his denunciations of that Government in 1871 for the occupation of Rome and the exclusion of the Pope from the exercise of civil power. In view of the threatened embarrassment, Mr. Keiley resigned his commission without leaving the United States, and Judge Stallo was appointed. Subsequently the mission to Austria was offered to Mr. Keiley and accepted; but after his departure for Europe an intimation was received that the appointment would not be acceptable to the Austrian Government. The first communication from Count Kalnoky to Baron Schaeffer, the Austrian Minister at Washington, contained this statement: "The position of a foreign envoy wedded to a Jewess by civil marriage would be untenable and even impossible in Vienna." In the subsequent correspondence it was apparent that the fact that Mr. Keiley had been objected to by the Italian Government was one reason why he was not acceptable to that of Austria. To Minister John M. Francis, Count Kalnoky expressed his regret that the first intimation of objection had not been sufficient, without making the reasons a matter for discussion before the world. As the United States Government refused to withdraw Mr. Keiley's appointment or ask him to resign it, the Austrian Government declined to receive him. He returned to the United States after some weeks spent in Paris, and gave up his commission, and the post at Vienna remains vacant.

Civil Appointments.—Among the important civil appointments made soon after the new Administration came in were the following: Assistant Secretary of the Treasury, Charles S. Fairchild, of New York; Commissioner of Pensions, Gen. John C. Black, of Illinois; Commissioner of Internal Revenue, Joseph S. Miller, of West Virginia; Commissioner of Patents, Martin V. Montgomery, of Michigan; First Assistant Postmaster-General, Malcolm Hay, of Pennsylvania; First Comptroller of the Treasury, Milton J. Durham, of Kentucky, Commissioner of the General Land-Office; William A. J. Sparks, of Illinois; Assistant Secretary of the Interior, Henry L. Muldrow, of Mississippi; Solicitor of the Treasury, Alexander McCue, of New York; Commissioner of Railroads, Joseph E. Johnston, of Virginia; Commissioner of Agriculture, Norman J. Coleman, of Missouri; Second Assistant Postmaster-General, A. Leo Knott, of Maryland. Later in the year, First Assistant Postmaster Hay resigned on account of ill health, and was succeeded by William E. Smith, of New York. Considerable interest was attached to the appointment of Postmaster at New York on the expiration of the term of Henry G. Pearson. His reappointment was very generally demanded, and was opposed only on party grounds. After some delay and discussion, Mr. Pearson was reappointed on the 31st of March, and was confirmed on April 2, the last day of the special session of the Senate. During the recess of Congress several important appointments were made.

During the summer the terms of the Collector of Customs, and Naval Officer, and Surveyor of the Port of New York expired, and the Appraiser was suspended, the Assistant Appraiser, Lewis McMullen, being promoted to the place. Silas W. Burt, whom President Arthur had failed to reappoint to the same office, and who was afterward appointed Chief Examiner under the Civil-Service Commission of New York by Gov. Cleveland, was made Naval Officer; Edward L. Hedden was appointed Collector, and Hans S. Beattie, Surveyor, on the 27th of June. The two last named were connected with the political faction in New York city known as the County Democracy, and a few days later the claims of the Tammany organization were recognized in the appointment of William Dorsheimer as District Attorney and Martin T. McMahon as Marshal for the Southern District of New York. When in August the Civil-Service Commission called upon Surveyor Beattie to name two or three persons from his office from whom a member of the Examining Board might be selected, he named only his private secretary, and urged his appointment, intimating that he would name no other unless reasons were given why his choice was not a proper one. No reasons were vouchsafed, and his choice was not accepted. Considerable interest was excited in September, when Collector Hedden removed Capt. George B. Bacon, chief weigher for the Brooklyn district, and appointed George H. Sterling, a local politician, to his place. A few days later Mr. Sterling was suspended by order of the Secretary of the Treasury, and directions were subsequently given that the place be filled on competitive examination. Mr. Sterling passed the examination, but was rated low on the list of eligibles. By order of the President, the entire eligible list was certified to the Collector for appointment, but John W. O'Brien, first on the list, and a veteran soldier, was selected for the place. Near the close of the year the term of Thomas C. Acton, Assistant Treasurer at New York, expired, and after several persons to whom it was offered had declined the office, Mr. Jordan, the Treasurer at Washington, took charge of it. Mr. Acton went out under protest on the 2d of January, 1886, claiming that he was not discharged from his bonds until his successor was appointed. A few weeks later, Charles J. Canda was appointed to the place, and qualified for its duties.

Civil-Service Incidents.—Criticism of the appointments of the President and heads of departments emanated from two sources—from Democrats who desired that more changes should be made, and that party service should receive more consideration; and from those who insisted that in those grades of the service which had no connection with the public policy of the Administration, and in offices in which there was no confidential relation with the appointing officer, no changes should be made without cause before the expiration of terms, and that qualifications and fitness should be chiefly regarded in making appointments. Complaint was caused by the appointment of Eugene Higgins, of Maryland, as appointment clerk in the Treasury Department, at the instance of Senator Gorman, it being alleged that as a political manager his methods had been disreputable, and that his standing in his own State was not good. He was retained in the service notwithstanding the complaints. The charges against Higgins were made by the Maryland Civil-Service Reform Association.



WILLIAM CROWNINSHIELD ENDICOTT,
Secretary of War.

Aquila Jones, the newly appointed postmaster at Indianapolis, was charged with disregarding the civil-service rules in making changes in the office, but an investigation by the Civil-Service Commission did not sustain the charge. The removal of Gen. Henry S. Huidekoper, postmaster at Philadelphia, called forth an ineffectual protest from Grand Army Post No. 1 of Pennsylvania. The appointment of ex-Gov. Noyes, of Ohio, as Government Director of the Union Pacific Railroad, on the recommendation of Gov. Hoadley, called out a Democratic protest which caused its withdrawal. An investigation of the affairs of the Coast and Geodetic Survey revealed (it was alleged) abuses and inefficiency, and Prof. Hilgard, the Superintendent, and several subordinate officers, were suspended.

Early in November changes were made in

the Civil-Service Commission. Alfred P. Edgerton, of Indiana, was appointed in place of Dorman B. Eaton, and William L. Trenholm, of South Carolina, in place of John M. Gregory. Mr. Eaton was then reappointed to succeed Mr. Leroy B. Thoman.

The Navy and New Vessels.—Soon after the accession of Secretary Whitney to office, he was notified of the completion of the dispatch-boat "Dolphin," constructed under contract by John Roach, at Chester, Pa., acceptance of which was recommended by the Naval Advisory Board. It was provided in the contract that the vessel should be accepted if it were shown to the satisfaction of the Advisory Board and of the Secretary of the Navy that the failure to fulfill certain requirements of the contract was not due to defective workmanship or materials. The Secretary was not satisfied with the report of the Advisory Board, and suggested a new trial of the vessel. He appointed a Board of Examiners, consisting of Commodore George E. Belknap, Commander R. D. Evans, and Constructing-Engineer Herman Winter, of the Navy, to take charge of the test. They reported, on June 12, that four trial-trips had been made, and that the vessel did not come up to the requirements in respect to power and speed, nor, so far as could be judged, in respect to structural strength. Thereupon the Secretary referred to the Attorney-General the question whether the Government was bound by the law and the terms of the contract to accept the vessel. He declared that the report of the Examining Board showed that the Government had not obtained what it had stipulated for, either in respect to strength, speed, or workmanship, and he wanted to know whether it had on its hands merely a bad bargain by which it was bound, or a broken contract entitling it to something better. On July 12 Attorney-General Garland submitted an opinion in which he discussed the matter at length, with reference to the provisions of the law, the requirements of the contract, and the powers of the Advisory Board that had supervised and approved the work. His conclusion was, that neither the law nor the terms of the contract had been complied with, and that the approval of the Supervisory Board did not bind the Government to accept the vessel. He went further, and declared that the contract itself was not valid. In conclusion he said:

> It follows then that no contract exists between Mr. Roach and the United States, and that the large sums of money which have been paid Mr. Roach have passed into his hands without authority of law, and are held by him as so much money had and received to the use of the United States and may be recovered from him; and not only so, but the money thus paid him by officials holding a fiduciary relation to the Government having gone into the ship "Dolphin," a court of equity will follow it there and for that purpose entertain a proceeding against the ship itself.

WILLIAM C. WHITNEY,
Secretary of the Navy.

As Mr. Roach was engaged upon the construction of the three cruisers "Chicago," "Atlanta," and "Boston," under contracts similar in terms to those for the "Dolphin," he was greatly embarrassed by this decision, and on the 19th of July made an assignment of his property to George W. Quintard and George E. Weed—the former being one of his bondsmen in the contracts with the Government. This raised the question what was to be done with the uncompleted cruisers. The contracts provided that in case of failure, at any time and for any cause, to go on with the work and make satisfactory progress, the Secretary of the Navy might declare the contracts forfeited, have an appraisal made of the value of the materials furnished and of the work done, and proceed to complete the vessels in accordance with the plans and terms of the contracts, using for the purpose the yard and appliances of the contractor. The matter was arranged with the assignees, the contracts were declared to be forfeited, a Board of Examiners was appointed, and an inventory and appraisal were made. The appraisers were instructed to ascertain the value of the uncompleted vessels by taking the contract price as their value when completed, and deducting therefrom the cost of finishing them in accordance with the terms and requirements of the contracts. The report of the Board of Appraisers was that the contract price of the "Chicago" was $933,692, and that it would require $208,045 to complete it, leaving $725,647 as the amount equitably due to the contractor; the contract price of the "Atlanta" was $661,978—amount necessary to finish it, $41,591; contract price of the "Boston," $660,218—necessary for its completion, $50,195. On this basis, the Government proceeded with the work of finishing the vessels, using the works and working force of the contractor in the hands of his assignees. In regard to the "Dolphin," the Secretary of the Navy proposed that the Government should take the vessel and pay the contract price for her "when made equal in all respects to the contract requirements." If the contractor could show that this had been done, he should recover the balance due; if not, there should be reserved a sufficient sum to make the vessel equal to the requirements. There had been no settlement of the matter at the end of the year.

A special board was appointed in July to examine and report upon plans and specifications for four new cruisers authorized by acts of Congress of 1882 and 1883; but the work of deciding upon these had not been finished at the end of the year.

In his annual report, the Secretary of the Navy urged the importance of a reorganization of the department, which he considered very faulty in its methods and in the practical results. He favored a distinct division of the naval administration into three branches—one having to do with the *personnel* of the navy and the fleet, one dealing with everything pertaining to construction and materials, and one having charge of the finance and accounts of the department and attending to contracts and purchases.

The expenditures of the Navy Department for the year ending June 30 were $13,337,867.72; the appropriations for the year ending June 30, 1886, were $13,950,704.95. The estimates made by the Secretary for the year 1886–'87 were $35,104,695.15, of which $16,069,950.24 was for new purposes. He included $10,503,770 for increase of the navy, $4,202,656 for completion and armament of the double-turreted monitors, and $4,268,337.41 for public works and improvements at navy-yards and stations. The question of building up the navy was one of the most important urged upon the attention of Congress at the session beginning in December.

AUGUSTUS H. GARLAND,
Attorney-General.

Military Operations.—The Army of the United States consists of 2,154 officers and 24,705 enlisted men. The expenses of the War Department for the last fiscal year were $45,850,999.54, including $13,164,394.60 for public works and river and harbor improvements. During the year ending June 30 there were 2,927 desertions from the army, 2,328 trials by general courts-martial, and 11,851 trials before garrison and regimental courts-martial. The Signal-Service Bureau, devoted mainly to meteorological observations and reports, employs 21 officers, 3 professors, 3 junior professors, 500 enlisted men, and 14 civilian clerks. The number of stations in operation is 489, from 160 of which telegraphic reports are received daily. The aggregate length of military telegraph lines in use is 2,779 miles. The expense of the Signal Service for the fiscal year was $792,592.57.

The active operations of the army were due mainly to Indian disturbances. Early in the year a band of white colonists entered the Indian Territory for the purpose of taking possession of lands for settlement in what was known as the Oklahoma country. On the 13th of March the President issued a proclamation warning all persons who had entered the Territory with this purpose, and all who were intending to do so, that they would not be permitted to remain, and declaring that the military power of the United States would be invoked "to abate all such unauthorized possession, to prevent such threatened entry, and to remove all such intruders from the said Indian lands." Col. Edward Hatch was sent with a moderate force, and an end was put to the invasion of the "Oklahoma boomers" without bloodshed or serious difficulty. Shortly afterward trouble was threatened by the Cheyenne and Arapahoe Indians, and, at the request of the President, Lieut.-Gen. Sheridan visited the Indian Territory to inquire into the causes of discontent. He reported that the principal occasion of the threatened outbreak was the occupation of the Indian lands by ranchmen and cattle-owners, under leases from the Indians at a merely nominal rental. It was decided at Washington that these leases were not legal or valid, and a proclamation was issued warning all owners of cattle to remove their herds from the Indian lands within forty days. All efforts to obtain a modification of the order, on the plea of loss and injury, and of the difficulty of moving the herds in the time allowed, were unavailing, and the Indian lands were as speedily as possible cleared of cattle belonging to white ranchmen. Another proclamation was issued on the 10th of August, ordering the removal of all fences with which public lands had been inclosed for grazing purposes. No force was required to carry out the purpose of either of these proclamations. An Indian difficulty which caused much disquietude on the borders of Colorado and Kansas, and in New Mexico, was occasioned by discontent with the short rations supplied to the southern Utes, near Fort Lewis, and the Mascalero Apaches near Fort Stanton. A timely inquiry, and attention to the grievances of the Indians, averted any serious outbreak, though small bands of warriors had started out on the war-path. In the southwestern part of New Mexico there was a serious disturbance caused by the incursion of a band of Chiricahua Apaches from Arizona. The control which Gen. Crook had for two years exercised over these troublesome savages had been disturbed by the interference of the agent at San Carlos, under authority of the Interior Department, in the previous winter, and a considerable number of warriors and squaws had escaped from the reservation to indulge in depredations upon settlers. Many were chased into Mexico, and a number killed and captured. While these various movements caused much alarm, they nowhere attained a very serious magnitude, and all trouble had ceased before the end of the year, except that caused by the Chiricahuas still at large under Chief Geronimo. A considerable force was kept in the field near the northern frontier in Dakota and Montana during the summer, to prevent the Indians from crossing the border to take part in the Riel rebellion in Canada, and to prevent the Manitoba Indians from taking refuge in those Territories. Temporary outbreaks of violence against the Chinese at Rock Springs, Wyoming, and at Seattle, Washington Territory, caused troops to be sent to those places, but they had no occasion to act in putting down insurrection.

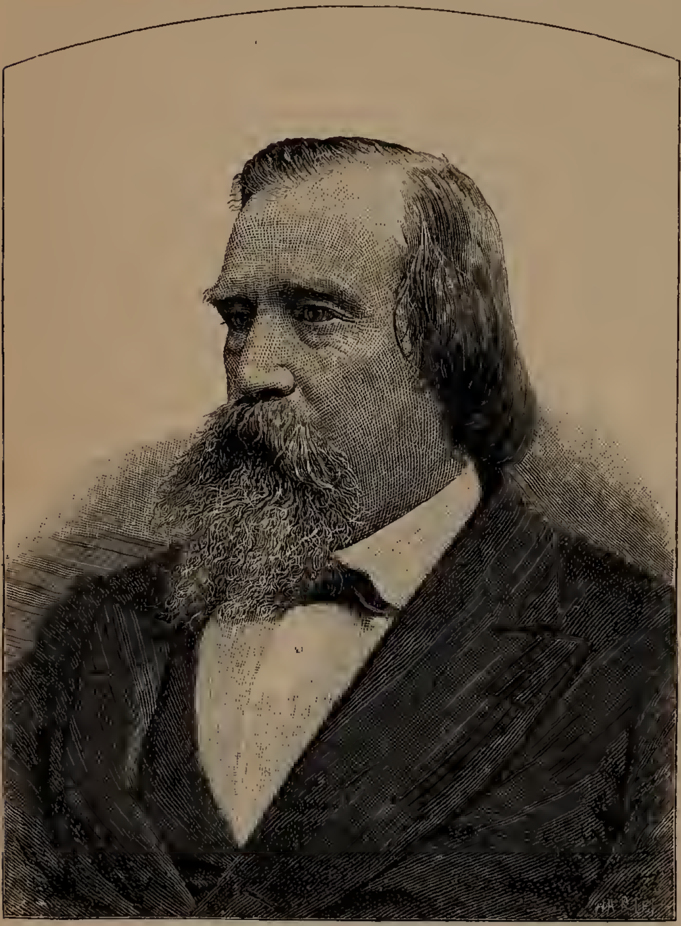
WILLIAM FREEMAN VILAS,
Postmaster-General.

The Indians.—The Indian population of the United States, exclusive of Alaska, is about 260,000, all but 15,000 of whom are west of the Mississippi. Most of the Indians are on reservations, and maintain their tribal relations. The policy of allotting lands to the Indians in severalty, at the rate of 320 acres to each family, and selling the rest of the reservation for settlement, reserving the proceeds as a fund for the benefit of the former occupants, was recommended with more or less qualification by the Commissioner of Indian Affairs and the Secretary of the Interior, and strongly advocated by the Lieutenant-General of the Army. Gen. Sheridan, in a statement prepared by him, dated Jan. 2, 1886, sets forth the following facts: In Dakota the St. Berthold reservation includes an area of 2,900,000 acres, and has a population of 1,300; the other Sioux reservations aggregate nearly 22,250,000 acres, and are occupied by 25,800 persons. According to the allotment proposed, the sale of the surplus at $1.25 per acre, and the investment of the proceeds at 4 per cent. for the benefit of the Indians, this would open over 20,000,000 acres to settlement, and furnish an income of more than $1,000,000 a year. In Montana the Blackfeet reservation contains 21,500,000 acres, occupied by 7,000 Indians, and the Crow reservation, of 4,800,000, is occupied by 3,300 persons. The Indians of these two Territories number 45,000, and their reservations include 54,500,000 acres. According to Gen. Sheridan's calculation, their surplus lands would yield a revenue of $2,500,000, while the appropriations for their benefit under existing treaties are about $100,000. In Wyoming and Idaho the Wind river, Fort Hall, and Cœur d'Alène reservations include 5,000,000 acres, occupied by 6,000 Shoshones and Bannocks; from the surplus lands an income of $235,000 might be derived, or $100,000 more than the annual appropriation for the benefit of the occupants. In Oregon the Klamath reservation, 1,000,000 acres, is occupied by 1,000 Indians; in Washington Territory the Yakames, 3,200 in number, have a reservation of 800,000 acres, and the total for the State and Territory is 16,000 Indians and 8,400,000 acres of reservation. The Utes, in Utah and Colorado, numbering 3,650, have 5,000,000 acres of reservation; the Navajoes, in New Mexico, numbering 23,000, have 8,000,000 acres. The principal reservation in Arizona is the White Mountain, with the agency at San Carlos. Its extent is 2,500,000 acres, and the Indians entitled to occupy it number about 5,000. In New Mexico and Arizona the total of Indians is 53,000, of reservations 16,500,000 acres. The Indians of the Indian Territory number about 80,000, and their reservations, excluding the Oklahoma country, aggregate 31,500,000 acres. This is Gen. Sheridan's conclusion:

> The Indian reservations of the United States contain about 200,000 square miles. Their population is about 260,000. Twenty-six thousand square miles would locate each family upon a half section of land, leaving a surplus of about 170,000 square miles, which, according to the plan I have proposed, would produce annually $4,480,000. This amount exceeds by about $660,000 the entire sum appropriated for the payment of their annuities and for their subsistence and civilization.

Postal Service.—The postal revenues for the fiscal year ending June 30 were $42,560,843, while the expenses amounted to $50,942,415, showing a deficiency of $8,381,571. This was partly accounted for by the continuing effect of the reduction of letter-postage from three to two cents as the single rate, and the subsequent increase of weight for single-rate letter-postage from one half ounce to one ounce, and the increase of the unit of weight for second-class matter from two ounces to four ounces. The number of post-offices at the end of the fiscal year was 51,252, a net increase for the year of 1,235, the number established being 2,121, and the number discontinued 886. The number of postmasters subject to appointment by the President was 2,233, by the Postmaster-General 49,019. The number of appointments made during the year was 11,203, of which 6,204 were on account of resignation and expiration of terms; 2,221 on account of the establishment of new offices; 412 on account of death of incumbents; 207 on account of changes of names and sites; and 810 in consequence of removals and suspensions. The total number of changes was less than for the preceding year, but the number of removals and suspensions exceeded that of the previous year by 297. The provision for the immediate delivery of letters on payment of 10 cents extra postage by a special stamp went into effect Oct. 1, in all places of 4,000 inhabitants and over. The Postmaster-General declined to pay out the $400,000 appropriated by Congress for foreign mail service, to be distributed among American vessels carrying the mails, on competitive bids, not to exceed 50 cents a mile for the distance sailed. He took this course on the ground that the existing compensation was sufficient, and that it was impracticable to disburse the appropriation by contract on competition. There were half a dozen steamship companies that would be entitled to a share, but they were not competitors, and the fund was not sufficient for a *pro rata* division on the basis of 50 cents a mile. The steamship companies which claimed the benefit of the appropriation declined, after Aug. 1, to carry the mails at the old rates, and other provision was made for the postal service to the West Indies, Central and South America, and to New Zealand and Australia.

Life-Saving Service.—The number of life-saving stations at the close of the fiscal year was 203, of which 157 were on the Atlantic coast, 38 on the lakes, 7 on the Pacific, and 1 at the Falls of the Ohio river, Louisville, Ky. The number of disasters to documented vessels was 256, on board of which were 2,206 persons, of whom 2,196 were saved and 10 lost. The value of the vessels and cargoes was $4,604,455, of which $3,852,760 was saved. Fifty-six vessels were totally lost. There were also 115 disasters to smaller craft, in which 232 persons were saved and only 1 lost. The value of property involved in these was $29,925, and $26,823 of this was saved. Thirty-seven other persons were rescued by the life-saving crews, and 366 vessels were assisted when in peril, and 204 warned when running into danger. The cost of the service was $828,474.43.



LUCIUS QUINTUS CURTIUS LAMAR,
Secretary of the Interior.

Miscellaneous Statistics.—The number of names on the pension-rolls at the end of the fiscal year was 345,125. There had been 35,768 new names added and 1,835 reinstated during the year, and 15,233 were dropped, leaving a net increase of 22,369. The average annual value of pensions was $110.36, and the aggregate annual value $38,090,985. The operations of the General Land-Office showed that 3,912,450 acres had been sold. The total cash receipts were $8,610,598.32. Entries and selections for the year amounted to 20,995,513 acres; surveys, 31,523,689 acres. The total area of public lands surveyed to June 30 was 969,469,347 acres; unsurveyed, 845,360,390 acres. Excluding Alaska, about three fifths of the public domain had passed out of the ownership of the Government. There were at the end of the year 80 new public buildings in course of construction, ranging in cost from $25,000 to $2,000,000, and calling for a total expenditure of $8,511,400.

Coast Defenses.—A commission consisting of Secretary of War Endicott; Gen. Benét, Chief of Ordnance; Gen. Newton, Chief of Engineers of the Army; Gen. Abbot of the Engineer Corps, Capt. Smith of the Ordnance Department, Captains Sampson and Goodrich of the Navy, Capt. Maguire of Engineers, Joseph Morgan, Jr., of Philadelphia, and Erastus Corning, of New York, was engaged during a large part of the year in inquiring into the subject of coast defenses and fortifications, with a view of reporting upon the needs of the country in that respect. The report was submitted in January, 1886. A letter to the Speaker of the House of Representatives from Samuel J. Tilden, of New York, was published early in December, strongly urging the policy of providing, as speedily as practicable, an adequate system of coast defenses.

The Anti-Polygamy Act.—The act of March 22, 1882, for the suppression of polygamy in Utah, known as the Edmunds act, was upheld by the Supreme Court in decisions rendered on the 22d of March in a series of five cases, in which the right of the commissioners appointed under the act to exclude from the exercise of the elective franchise all persons practicing polygamy had been contested.

The Fisheries.—A diplomatic understanding was entered into by the State Department and the British Minister at Washington, public notice of which was given on the 25th of June, for the extension of the privileges defined and secured by the fishery clauses of the Treaty of Washington, through the season which had then been entered upon. By joint resolution of Congress, adopted March 3, 1883, notice had been given of the abrogation of these clauses of the treaty on the 1st of July, but no other arrangement had been made, and fishing operations had begun as usual. To avoid collision and dispute, the negotiations had been entered upon at the suggestion of the British Minister, which resulted in the diplomatic agreement. This included an understanding "that the President of the United States would bring the whole question of the fisheries before Congress at its next session in December, and recommend the appointment of a commission in which the Governments of the United States and of Great Britain should be respectively represented, which commission should be charged with the consideration and settlement upon a just, equitable, and honorable basis of the entire question of the fishing rights of the two Governments and their respective citizens on the coasts of the United States and British North America."

Court of Alabama Claims.—The Court of Commissioners of Alabama Claims expired by limitation at the close of the year. It had disposed of all the cases before it by working rapidly during the last weeks of its existence, but question was afterward raised as to whether all the determinations were final and valid. In September the accounting officers of the Treasury refused to allow the expenses certified by the judges of this court for the compensation of extra counsel, experts, and clerks, in excess of those provided for by law. This refusal was sustained in November by the Attorney-General in an opinion rendered upon the question of the right to incur expenses for these purposes beyond what the statute expressly authorized.

Southern Industrial Enterprise.—The following is a statement of the manufacturing and mining enterprises organized in the Southern States in 1884:

STATES.	New establishments.	Capital.
Alabama	187	$16,925,000
Arkansas	46	2,040,000
Florida	95	2,323,000
Georgia	196	5,455,000
Kentucky	137	21,762,000
Louisiana	53	5,534,000
Maryland	105	7,121,500
Mississippi	40	1,295,000
North Carolina	226	4,110,000
South Carolina	53	2,174,000
Tennessee	250	7,910,000
Texas	212	10,778,000
Virginia	188	13,450,000
West Virginia	77	4,392,000

In Kentucky, Alabama, and Virginia some extensive mining and iron companies, with large capital, were organized, which runs up the total of investments in these States, and they also added many smaller establishments. The list shows cotton and woolen mills, machine-shops, foundries, blast-furnaces, ice-factories, sawmills, planing-mills, building-material factories, furniture-factories, carriage and wagon factories, handle-factories, etc. There are many flour-mills and more tobacco-factories, and a large number of cotton-seed oil-mills, as well as mining enterprises of all kinds in gold, silver, copper, mica, oil, coal, etc.

Alaska.—A. P. Swineford, appointed Governor of the Territory in place of John H. Kinkead, reached Sitka on Sept. 15. His report to the Secretary of the Interior, dated Oct. 1, contains valuable information. In April the Rev. Sheldon Jackson was appointed general agent of education for the Territory. He reports that during the summer he established schools at Juneau, Sitka, Wrangell, Jackson, Boyd (Hoonah), Haines, and Oonalashka. A corps of teachers was also sent to establish schools on Kuskokvim river, 150 miles above where it flows into Behring Sea. The population of this section is exclusively Esquimau. The Industrial School at Sitka is doing good work in training native boys and girls in the mechanical trades and in household duties. The Presbyterian Board of Home Missions is prosecuting religious and educational work in the Territory.

The enumeration of the inhabitants of Alaska was begun, but not completed, in 1880 by Mr. Ivan Petroff, employed by the Census Bureau. His report shows the population of the western section to have been as follows in 1880:

Creoles	1,413
Aleuts	2,214
Whites	145
Total civilized people	3,772
Indians	20,889
Total	24,661

"A great popular error," says the Governor, "exists in regard to the climate of Alaska, the prevailing impression being that it is blessed (or cursed) with Arctic winters only. The winters of northern and interior Alaska undoubtedly correspond to the popular belief, but that belief when applied to southeastern Alaska and the Aleutian Islands becomes a popular fallacy." The following is a meteorological summary for the twelve months ending Aug. 31, 1885:

MONTH.	TEMPERATURE.			NUMBER OF DAYS.			
	Mean.	Maximum.	Minimum.	Clear.	Fair.	Cloudy.	Rain or melted snow.
1884.							
September	49·9°	65 7°	32°	9	7	14	18
October	42·7	55·1	26	3	3	25	26
November	43·1	55·8	27	3	7	20	23
December	32·1	56·3	14·6	15	4	11	10
1885.							
January	35·9	48·9	19	4	9	18	21
February	37·2	48·9	24	2	9	17	21
March	40·7	58·8	28·8	10	5	16	19
April	42·1	52	29	4	9	17	24
May	49·7	79·5	37	4	9	18	15
June	54·3	70	39·5	14	6	10	8
July	56·3	70·5	47	4	10	17	10
August	58·3	75	44·5	7	11	13	17
Total days	......	......	......	94	95	206	220

Governor Swineford deprecates the idea that crops will not mature here, and says: "Nowhere in my home travels, from Lake Superior to the Gulf of Mexico, from Washington to Sitka, have I seen a more luxuriant vegetation than here in southeastern Alaska. I find the hardier vegetables all growing to maturity and enormous size; white turnips weighing ten pounds, cabbages twenty-seven pounds, and as fine potatoes as can be found in any of the Eastern markets I found growing at Wrangell, Juneau, and here in Sitka. Wild timothy and red-top grow to a height of from five to seven feet, and in this vicinity all the hay was cured during the past summer that will be required during the winter."

The extensive reduction-works on Douglas Island, opposite to Juneau, were completed and put into operation about the 1st of July, and are, perhaps, the most complete of any to be found on the Pacific slope. During July and August this mill turned out $115,000 in gold bullion, while the accumulated sulphurets (concentrates) awaiting treatment were shown by frequent assays to be worth $100,000 more. The mine is in what appears to be simply a great mountain of gold-bearing quartz. The rock is what is called "low-grade milling," carrying free gold and sulphurets, and yields an average of about eight dollars a ton.

In the rear of Juneau two or three miles, on the mainland, is Silver Bow Basin, where some rich placer-mines are worked. The value of the product of these mines has been estimated at not less than $150,000 in 1884.

A San Francisco fleet of from twenty-five to thirty vessels is engaged in codfishing on the banks off Kadiak and the Shumagin Islands, while at Killisnoo the Northwest Trading Company is curing large numbers of cod, and has works for rendering oil from the herring which swarm in the waters of Chatham Strait.

UNITED STATES, FINANCES OF THE. The general policy that has hitherto prevailed in regard to national finances underwent no appreciable change during the year 1885. Congress having failed to enact any legislation touching the national banks or the coinage of silver, the contraction of bank-note circulation and the coinage of standard silver dollars continued; the public debt has been somewhat diminished and the cash assets have sensibly increased—the chief item of increase being the noteworthy addition to the amount of silver dollars held by the treasury. In other respects the financial history of the past year has been uneventful. The following statements show in detail the monetary transactions of the United States Government during the year:

Receipts and Expenditures.—The ordinary revenues of the Government, from all sources, for the fiscal year ending June 30, 1885, were as follow:

Customs	$181,471,939 34
Internal revenue	112,498,725 54
Sales of public lands	5,705,986 44
Tax on national banks	2.914,222 25
Profits on coinage	6,051,284 96
Customs fees, fines, etc	907,464 27
Consular fees, etc	3,714,613 58
Pacific Railroad interest	1,608,071 58
Pacific Railroad sinking fund	2,476,707 78
Surveying public lands	594,414 34
Sales of Government property	302,882 07
Indian trust funds	76,942 08
Immigrant fund	177,002 50
Soldiers' Home fund	333,735 05
Sale of naval vessels	55,541 80
Tax on tonnage	400,342 46
Revenues of District of Columbia	1,929,298 11
Miscellaneous	2,471,532 23
Total	$323,690,706 38

The ordinary expenditures for the same period were:

Civil list	$23,826,942 11
Foreign intercourse	5,439,609 11
Indian service	6,552,494 63
Pensions	56,102,267 49
Military establishment	42,670,578 47
Naval establishment	16,021,079 67
Miscellaneous, including public buildings, lighthouses, and collecting the revenue	54,728,056 21
District of Columbia	3,499,650 95
Interest on the public debt	51,386,256 47
Total	$260,226,935 11

As compared with the previous fiscal year, the revenues fell off $28,474,134.50, the principal items of decrease being customs, $13,595,550.42; internal revenue, $9,087,346.97, and sales of public lands, $4,104,718.57. There was an increase of $3,644,970.96 in profits on coinage, and in consular, customs, and other fees, making a net decrease for the year of $24,829,163.54. There was an increase in the expenditures of $20,564,334.56, as follows: civil and miscellaneous, $16,573,824.68; military establishment, $3,240,975.11; pensions, $673,039.43, and Indian service, $76,495.34. There was a decrease of $1,271,521.77 in the naval establishment, and $3,192,122.01 in the interest on the public debt, making a net increase in the expenditures of $16,100,690.78. The excess of revenue over expenditures was $63,463,771.27, of which $45,992,745.43 was applied to the redemption of the debt. The revenue derived from the various objects of internal taxation during the last two fiscal years is shown in the following table:

OBJECT.	1884.	1885.
Spirits	$76,905,385 26	$67,511,208 63
Tobacco	26,062,399 98	26,407,088 48
Fermented liquors	18,084,954 11	18,230,782 03
State banks and bankers	441 84	25,000 00
Miscellaneous	586,858 64	247,041 93
Total	$121,590,039 83	$112,421,121 07

The following table shows the receipts and expenditures of the Government for the calendar years 1884 and 1885:

RECEIPTS.	1884.	1885.
Customs	$186,598,819 86	$184,622,393 24
Internal revenue	117,298,625 98	114,483,947 13
Sales of public lands	7,344,972 04	5,288,125 47
Tax on national banks	3,028,360 71	2,792,305 67
Profits on coinage	4,759,422 58	5,610,071 91
Miscellaneous	14,667,629 00	14,104,545 98
Total	$333,697,830 17	$326,901,389 40

EXPENDITURES.	1884.	1885.
Civil and miscellaneous	$79,466,346 42	$84,448,021 86
War	40,358,715 96	37,666,479 55
Navy	17,265,509 29	15,169,650 16
Indians	6,225,912 84	6.483,955 42
Pensions	58,187,982 51	61,255,950 71
Interest on the public debt	52,723,796 14	50,834,954 69
Total	$254,228,263 16	$255,859,012 39

The revenues derived by the Government from the postal service, being collected and disbursed through the agency of the Post-Office Department, do not enter into the general accounts of the treasury, and are therefore not included in the foregoing statements.

State of the Treasury.—The gold coin and bullion in the treasury increased during the year $18,375,557.53 ; the silver coin and bullion increased $18,296,310.51 ; the United States notes increased $5,231,624.69 ; and the total assets increased from $476,399,297.90 to $511,277,120.06, or a gain of $34,877,822.16. The gold certificates actually outstanding increased $12,072,181 ; the silver certificates outstanding decreased $21,686,446 ; the legal-tender certificates outstanding decreased $10,970,000, and the total liabilities fell off from $435,859,368.26 to $411,934,972.31 ; showing a decrease of $23,924,395.95, or a net gain of $58,802,218.11. The gold coin on hand not represented by certificates decreased $2,831,405.60, and the silver dollars not represented by certificates increased from $31,636,954 to $72,538,725, a gain of $40,901,771, or nearly 130 per cent. The following comparative statement shows the condition of the treasury at the close of the years 1884 and 1885:

ASSETS.	Dec. 31, 1884.	Dec. 31, 1885.
Gold coin	$171,553,205 17	$180,793,980 57
Gold bullion	63,422,646 78	72,557,428 91
Standard silver dollars	146,502,865 00	165,718,190 00
Silver bullion	4,716,055 33	3,797,040 84
United States notes	36,499,575 42	41,731,200 11
National-bank notes	2,457,457 83	1,838,893 53
Deposits in national-bank depositaries	13,144,036 63	12,901,432 33
Fractional and minor coin	29,932,873 14	28,323,275 52
National-bank notes in process of redemption	7,872,536 04	3,508,863 39
Miscellaneous items	298,046 56	106,804 86
Total	$476,399,297 90	$511,277,120 06

LIABILITIES.	Dec. 31, 1884.	Dec. 31, 1885.
Gold certificates outstanding	$93,287,420 00	$105,359,601 00
Silver certificates outstanding	114,865,911 00	93,179,465 00
Currency certificates outstanding	24,760,000 00	13,790,000 00
Reserve for redemption of United States notes	100,000,000 00	100,000,000 00
Funds for retirement of bank circulation	42,292,084 10	41,519,776 73
Five per cent. redemption fund	12,487,117 36	12,003,701 81
Disbursing officers' balances	29,071,460 97	20,965,226 53
Transfer checks and drafts	5,232,331 84	3,991,475 21
Post-Office Department account	3,973,821 28	3,038,601 21
Matured debt and interest	8,965,507 95	16,910,950 85
Miscellaneous items	923,718 76	1,176,173 97
Balance	40,539,929 64	99,312,147 75
Total	$476,399,297 90	$511,277,120 06

The Public Debt.—The following statement shows the principal and interest of the national debt at the close of the years 1884 and 1885:

CHARACTER OF DEBT.	Dec. 31, 1884.	Dec. 31, 1885.
Bonds at 4½ per cent	$250,000,000 00	$250,000,000 00
Bonds at 4 per cent	737,696,950 00	737,743,250 00
Bonds at 3 per cent	194,190,500 00	194,190,500 00
Refunding certificates at 4 per cent	260,000 00	221,400 00
Navy pension fund at 3 per cent	14,000,000 00	14,000,000 00
Interest accrued on the above loans	11,186,846 96	11,301,184 34
Debt on which interest has ceased	6,993,925 26	3,447,475 26
Interest on matured debt	261,055 17	202,213 11
Demand and U. S. notes	346,739,256 00	346,738,806 00
Clearing-House cert's	24,920,000 00	14,055,000 00
Gold certificates	119,631.150 00	139,710,080 00
Silver certificates	138,168,291 00	124,343,776 00
Fractional currency	6,971,343 36	6,959,153 77
Bonds issued to Pacific Railway Companies	64,623,512 00	64,623,512 00
Interest unpaid thereon	4,229 96	4,229 96
Total debt	$1,915,647,059 71	$1,907,540,580 44

No "calls" having been made for the redemption of interest-bearing bonds during the year 1885, the amount of such bonds outstanding is substantially the same as at the close of the preceding year, although it will be observed that the total debt is $8,106,479.27 less; the difference being due mainly to the payment of matured debt and to the decreased issue of currency and silver certificates.

The following table shows the changes in the various denominations of United States legal-tender notes in circulation during the years 1884 and 1885:

DENOMINATIONS.	Dec. 31, 1884.	Dec. 31, 1885.
One dollar	$26,523,143 80	$21,534,019 80
Two dollars	26,840,217 20	22,135,699 20
Five dollars	77,538,815 00	89,944,951 00
Ten dollars	67,860,366 00	70,878,648 00
Twenty dollars	55,518,489 00	58,170,743 00
Fifty dollars	22,703,695 00	22,589,455 00
One hundred dollars	33,263,790 00	28,749,000 00
Five hundred dollars	15,015,000 00	13,032,000 00
One thousand dollars	22.272,500 00	20,571,500 00
Five thousand dollars	100,000 00	65,000 00
Ten thousand dollars	50,000 00	10,000 00
Total	$347,681,016 00	$347,681,016 00
Deduct for unknown denominations destroyed.	1,000,000 00	1,000,000 00
In circulation	$346,681,016 00	$346,681,016 00

The National Banks.—During the year ending Nov. 1, 1885, 145 national banks, with an aggregate capital of $16,938,000, to which $4,274,900 in circulating notes were issued, were organized. Of these banks, 4, with $400,000 capital, were located in the Eastern States; 20, with $2,895,000 capital, in the Middle States; 21, with $2,425,000 capital, in the Southern States; 76, with $9,473,000 capital, in the Western States; 8, with $725,000 capital, in the Pacific States; and 16, with $1,020,000 capital, in the Territories. Since the establishment of the national banking system in 1863, there have been organized 3,406 banks. Of these, 432 have gone into voluntary liquidation for the purpose of winding up their affairs; 79 have gone into liquidation for the purpose of reorganization; 64 are in liquidation by expiration of their charter, of which number 38 have been reorganized; and 104 have been placed in the hands of receivers for the purpose of closing up their affairs; leaving a total of 2,727 banks in existence on Nov. 1, 1885, which is the largest number that has been in operation at any one time. The corporate existence of 864 banks expired during the year, of which 801 have been extended under the act of July, 1882; 48 have permitted their corporate existence to expire, and are in liquidation; 13 have been placed in voluntary liquidation; and the remaining 2 became insolvent and were placed in the hands of receivers. The corporate existence of 14 banks, with an aggregate capital of $4,450,000, expired during November and December, 1885; and 18 banks, with an aggregate capital of $3,135,000, will expire during the year 1886. A larger number of banks have expired by limitation during the year ending Nov. 1, 1885, than have or will expire during any other year between the passage of the act of July, 1882, and the year 1900.

The following statement shows the condition of the national banks on Dec. 24, 1885, as shown by reports from 2,732 banks then in operation:

RESOURCES.

Loans and discounts		$1,337,887,918 21
Overdrafts		5,629,641 75
United States bonds to secure circulation		304,776,750 00
United States bonds to secure deposits		18,012,000 00
United States bonds on hand		12,665,750 00
Other stocks, bonds, and mortgages		77,533,841 38
Due from approved reserve agents		139,269,822 81
Due from other national banks		79,421,931 66
Due from State banks and bankers		18,553,946 46
Real estate, furniture, and fixtures		51,963,062 01
Current expenses and taxes paid		9,416,971 01
Premiums paid		11,802,199 86
Clearing-House loan certificates		630,000 00
Checks and other cash items		12,809,940 57
Exchanges for Clearing-House		92,351,296 77
Bills of other banks		23,178,052 00
Fractional currency		415,082 71
Trade-dollars		1,671,208 77
Specie, viz.:		
Gold coin	$70,107,747 56	165,354,352 37
Gold treasury certificates	59,611,840 00	
Gold Clearing-House cert's.	26,634,000 00	
Silver coin, dollars	5,303,288 00	
Silver coin, subsidiary	2,060,136 81	
Silver treasury certificates	1,637,340 00	
Legal-tender notes		67,585,466 00
United States certificates of deposit for legal-tender notes		11,765,000 00
Five per cent. redemption fund with Treasurer of the United States		13,404,764 84
Due from Treasurer of the United States other than redemption fund		1,576,256 95
Aggregate		$2,457,675,256 13

LIABILITIES.

Capital stock paid in		$529,360,725 00
Surplus fund		150,155,549 52
Other undivided profits		69,229,645 82
National-bank notes issued	$273,611,130 00	
Amount on hand	6,180,293 00	
Amount outstanding		267,430,837 00
State-bank notes outstanding		133,932 00
Dividends unpaid		1,360,977 27
Individual deposits		1,111,429,914 98
United States deposits		12,058,768 36
Deposits of United States disbursing officers		3,005,783 11
Due to other national banks		216,564,533 96
Due to State banks and bankers		85,060,162 27
Notes and bills rediscounted		9,932,828 24
Bills payable		1,951,598 60
Aggregate		$2,457,675,256 13

Notwithstanding the fact that 145 new banks were organized during the past year, with an aggregate capital of $16,938,000, depositing bonds to the amount of $4,959,300 as security for circulating notes, the aggregate of bonds on deposit for that purpose has fallen from $325,316,300 to $308,364,550. The following table shows the kinds and amounts of United States bonds deposited as security for circulation on Nov. 1, 1884, and Nov. 1, 1885:

CLASSES OF BONDS HELD.	Nov. 1, 1884.	Nov. 1, 1885.
Three per cents	$155,604,400	$138,920,650
Four and one half per cents.	49,537,450	49,547,250
Four per cents	116,705,450	116,391,650
Six per cents	3,469,000	3,505,000
Total	$325,316,300	$308,364,550

It will be seen, from the foregoing table, that the aggregate reduction of bonds deposited for the year ending Nov. 1, 1885, was $16,951,750. The decrease of national-bank circulation during the past three years was: in 1883, $8,284,917; in 1884, $24,170,676; and in 1885, $15,545,461.

The reduction of circulation during the past year was mainly due to the small profits accruing to the banks after payment of the 1 per cent. tax imposed by the Government, the reduction in the rate of interest due to the superabundance of money in the country, and the feeling engendered, by the rapid increase of silver in the treasury, that the public securities might at no distant date be paid in silver dollars. While it is doubtless true that, with the gradual redemption of the public debt, the tendency of bank circulation will be toward contraction, and possible extinction, unless some other form of security be adopted, it is not believed that any considerable number of the banks will voluntarily surrender their circulation. A few years ago it was thought they would not remain under the national law unless their circulation were made more profitable. It is in reality less profitable now than ever before; but the expectation that the banks will withdraw from the system is very much less. The gravity of the question is, however, admitted, and Congress will no doubt afford some measure of relief during its present session.

The President, in his annual message, thus referred to the subject: "The very limited amount of circulating notes issued by our national banks compared with the amount the law permits them to issue, upon a deposit of bonds for their redemption, indicates that the volume of our circulating medium may be largely increased through this instrumentality. Nothing more important than the present condition of our currency and coinage can claim your attention."

The Comptroller of the Currency, in his annual report, renews the proposition made by his predecessor for the establishment of a fund for the security of the note-holders, to be formed (1) from the gain arising from accidental loss or destruction of bank-notes, estimated now to be not less than $6,000,000; (2) from a tax upon circulation, now at the rate of 1 per cent., yielding some $3,000,000 annually; and (3) from interest at a low rate upon the fund on deposit in the treasury for the purpose of redeeming the notes of banks retiring circulation, which now amounts to more than $39,000,000. The Comptroller gives statistics with reference to the 104 banks that have failed, showing what proportion of the note issues could have been redeemed from the assets of those banks, on which the note-holders have a first lien, and adds: "The experience with these 104 banks shows almost conclusively that if their issues to the amount of 65 per cent. of their capital had been secured by a deposit of bonds to an equal amount, the remaining 25 per cent. might have been issued without other security than a first lien on the general assets, and if a safety fund had been in existence it would in the case cited have been drawn upon to the extent of $62,000 only upon a circulation amounting to $5,464,700. For a beginning, therefore, it might be safe to authorize banks to issue circulation amounting to 90 per cent. of their capital, 70 per cent. to be secured by an equal amount of United States bonds at par value, the remaining 20 per cent. being issued without other security than a first lien on such assets. But if the law should provide for the accumulation of a safety fund in the manner suggested, then, as such safety fund increased, the percentage of circulation unsecured by bonds might be increased, as the diminution of the public debt might require and the safety fund warrant."

The Coinage.—The value of the gold deposited at the mints and assay-offices during the fiscal year 1885 amounted to $52,894,075.09, of which $31.584,436.64 consisted of domestic bullion; $325,210.97 of United States coin; $1,869,363.26 of jewelers' bars, old plate, etc.; $11,221,846.45 of foreign bullion; and $7,893,217.77 of foreign coin. In addition to the above, the value of the gold in the fine and unparted bars, prepared and redeposited during the year, amounted to $3,854,677.51; making the total value of the gold deposited during the year $56,748,752.60. The total amount deposited during the previous year, exclusive of redeposits, was $46,326,678.66. The value of the silver deposited for bars and purchased for coinage, was $36,789,774.92, of which $32,250,044.94 was of domestic production; $877,564.58 consisted of United States coin remelted; $435,692.19 of jewelers' bars, old plate, etc.; $2,104,396.35 of foreign bullion; and $1,122,076.86 of foreign coin. The coining value of the fine and unparted bars manufactured and redeposited was $1,292,447.95; making the total value of the silver received during the year $38,082,222.87. The total coining value of the gold and silver deposited and purchased, including redeposits, was $94,830,975.47, against $87,955,153.92 in the previous year.

The coinage of gold during the year was $24,861,123.50; of silver, $28,848,959.65; and of minor coins, $527,556.80—a total of $54,237,639.95. The number of pieces and standard value of the coinage executed were as follow:

DESCRIPTION.	Pieces.	Value.
Gold	1,748,158	$24,861,123 50
Silver	31,699,096	28,848,959 65
Minor coins	24,610,760	527,556 80
Total	58,058,014	$54,237,639 95

Of the gold coinage, $20,048,500 were in double eagles; $2,246,890 in eagles; $2,545,900 in half-eagles; $5,670 in $3 gold pieces; $6,982.50 in quarter-eagles, and $7,181 in $1 pieces. Of the silver coinage, $28,528,552 consisted of standard silver dollars; $2,557.50 of half-dollars; $2,178.75 of quarter-dollars, and $315,671.40 of dimes. In addition to the coinage executed, gold bars of the value of $32,027,463.02, and silver bars of the value of $9,549.313.37, a total of $41,586,776.39, were manufactured at the mints and assay-offices during the year. The number of silver dollars added to the coinage during the year was $28,697,767, making the total coinage to Dec. 31, 1885, $218,259,761, of which the treasury held $72.538,725 unrepresented by certificates.

Of the numerous questions discussed by the Secretary of the Treasury in his annual report on the finances, the one bearing upon currency reform is placed first in the order of importance, for the reason, as he states, that it fitly precedes and will facilitate all other reforms, and because it can not safely be deferred. After stating the conditions upon which such a reform may be undertaken, and contending that the use of gold and silver, with free coinage for each, has not been and can not be maintained without international agreement, he shows that during eighty years, with free coinage, the people called for only $8.000,000 of silver, while in only eight years Congress has required the coinage of $215,000,000. He gives an able review of the legislation of past years on the subject of coinage, tracing the virtual disuse of silver back to the mistaken legislation of 1834, which, as he claims, was enacted contrary to the advice of that eminent and experienced financier, Mr. Gallatin. Continuing the consideration of the subject, the Secretary says:

> This analysis of our coinage laws and explanation of their history yield light for guidance now. Ordained "to establish justice," the Constitution itself is buttressed by the first century of constancy in the Congress to a continuous and just equivalence in the successive coin embodiments of the monetary unit for a standard and measure of value. The precedent stands, and will stand for centuries to come, the admiration, the pride, the rule of law and of duty for many generations of self-governing freemen. It is for us to pass on unimpaired this high tradition of financial integrity. But of justice, as of liberty, eternal vigilance is the price. Our 215,000,000 silver dollars are by law full legal tender. Sharing that function with the monetary unit itself, the honor of the country, not less than its interests, is involved in the preservation of their equivalence with that unit, wherever our citizens dwell and our laws run. Equivalence in foreign trade, for the reasons above indicated, is for the present quite impracticable. Equivalence in domestic trade is practicable. But that equivalence is now imperiled by the continuing coinage and increasing number of the silver dollars. This is much more than a deliberate judgment of the Secretary of the Treasury. It is attested to him from the centers of trade in all parts of the country, as much from the South as the North, as much from the West as the East. Not alone our able statesmen and instructed economists and financiers advise the stopping of the silver coinage now, but wherever our fellow-citizens are concentrated in commercial cities and towns, the business classes engaged in the trade, the enterprises, and manufactures of those centers, and the still larger masses of working-men employed by them, urge the stopping of the silver coinage now. It is these classes which are always first to perceive such perils to industry and trade, and the consequences they entail. To their judgment in such a matter even the acts of Congress touching commerce and currency are finally appealed. For it is their interests first, and afterward the interests of the agricultural classes, which are endangered. Every business man from day to day must form his separate judgment of any medium of exchange which he may be obliged by law to take in his next bargain. Twenty years ago the gold dollar was not kept from a premium, to-morrow the silver dollar can not be kept from a discount, in disregard of their appraisal.

The President, in his annual message, said:

> We have now on hand all the silver dollars necessary to supply the present needs of the people and to satisfy those who from sentiment wish to see them in circulation; and if their coinage is suspended they can be readily obtained by all who desire them. If the need of more is at any time apparent, their coinage may be renewed. That disaster has not already overtaken us furnishes no proof that danger does not wait upon a continuation of the present silver coinage. We have been saved by the most careful management and unusual expedients, by a combination of fortunate conditions, and by a confident expectation that the course of the Government in regard to silver coinage would be speedily changed by the action of Congress. Prosperity hesitates upon our threshold because of the dangers and uncertainties surrounding this question. Capital timidly shrinks from trade, and investors are unwilling to take the chance of the questionable shape in which their money will be returned to them, while enterprise halts at a risk against which care and sagacious management do not protect. As a necessary consequence, labor lacks employment, and suffering and distress are visited upon a portion of our fellow-citizens especially entitled to the careful consideration of those charged with the duties of legislation. No interest appeals to us so strongly for a safe and stable currency as the vast army of the unemployed.
>
> I recommend the suspension of the compulsory coinage of silver dollars, directed by the law passed in February, 1878.

Of the entire amount of duties collected from imports during the year, $178,151,601.11, 70 per cent. was collected from the following articles: Sugar and molasses, 29 per cent.; wool and its manufactures, 15 per cent.; manufactures of silk, 8 per cent.; iron and steel, and their manufactures, 7 per cent.; manufactures of cotton, 6 per cent.; and from flax, hemp, jute, and their manufactures, 5 per cent

Taxation Reform.—The Secretary of the Treasury submitted with his annual report to Congress a special report, based upon a series of investigations instituted early in the year, bearing upon the present system of levying and collecting import duties, in which he advocates a reform in the system, and supports his views with those of the chief and other important officers of the customs service throughout the country, furnished in response to letters of inquiry addressed to them on the subject. He calls particular attention to the difficulties resulting from the disputes constantly occurring between importers and customs officers in regard to the commercial designation or classification, and the dutiable value, of imported merchandise, and forcibly contends that as such difficulties are due to and inhere in the existing tariff system, they can not be effectually remedied by any changes in the methods of administration. In his consideration of the subject the Secretary says:

> Besides the reforms which are desirable for the effective administration of any system of taxation levied through imported merchandise, and are indispensable for the administration of customs laws which, like our own, are a chaos rather than a system, I venture to hope that in due season it will be the pleasure of Congress to consider some other reforms upon which, as is requisite, all parties may agree, and that are of a different scope. Like our currency laws, our tariff laws are a legacy of war. If its exigencies excuse their origin, their defects are unnecessary after twenty years of peace. They have been retained without sifting and discrimination, although enacted without legislative debate, criticism, or examination. A horizontal reduction of 10 per cent. was made in 1872, but was repealed in 1875, and rejected in 1884. They require at our custom-houses the employment of a force sufficient to examine, appraise, and levy duties upon more than 4,182 different articles. Many rates of duty begun in war have been increased since, although the late Tariff Commission declared them "injurious to the interests supposed to be benefited," and said that a reduction would be conducive to the general prosperity. They have been retained, although the long era of falling prices, in the case of specific duties, has operated a large increase of rates. They have been retained at an average ad-valorem rate for the last year of over 46 per. cent., which is but 2½ per cent. less than the highest rate of the war period, and is nearly 4 per cent. more than the rate before the latest revision. The highest endurable rates of duty, which were adopted in 1862–'84 to offset internal taxes upon almost every taxable article, have in most cases been retained now from fourteen to twenty years after every such internal tax has been removed. They have been retained while purely revenue duties upon articles not competing with anything produced in the thirty-eight States have been discarded. They have been retained upon articles used as materials for our

own manufactures (in 1884, adding $30,000,000 to their cost), which, if exported, compete in other countries against similar manufactures from untaxed materials. Some rates have been retained after ruining the industries they were meant to advantage. Other rates have been retained after effecting a higher price for a domestic product at home than it was sold abroad for. The general high level of rates has been retained on the theory of countervailing lower wages abroad, when, in fact, the higher wages of American labor are at once the secret and the security of our capacity to distance all competition from "pauper labor" in any market. All changes have left unchanged, or changed for the worse, by new schemes of classification and otherwise, a complicated, cumbrous, intricate group of laws which are not capable of being administered with impartiality to all our merchants. As nothing in the ordinary course of business is imported unless the price here of the domestic as well as of the imported article is higher by the amount of the duty and the cost of sea-transit than the price abroad, the preference of the tax-payer for duties upon articles not produced in the United States is justified by the fact that such duties cost him no more than the treasury of his country gets. As for duties affecting articles that are also produced in the United States, the first to be safely discarded are those upon materials used by our own manufactures, which now subject them to a hopeless competition at home and abroad with the manufacturing nations, none of which taxes raw materials. It is not to be doubted that in any reform which shall finally receive the approval of the two houses of Congress, they will maturely consider and favorably regard the interests which can only gradually and carefully be adjusted, without loss, to changes in the legislative conditions for their advancing prosperity.

UNIVERSALISTS. The Trustees of the Universalist General Convention presented to that body, at its meeting in October, the following comparative statement of the general condition of the churches in 1884 and 1885:

	1884.	1885.
Number of parishes..........	875	891
Number of families..........	35,791	36,760
Church-membership.........	31,709	33,2[illegible]3
Sunday-school membership ..	50,069	50.279
Property, less debt	$6,736,079	$6,901,969
Expenses and contributions..	853,490	864,413

Fifteen Young People's Missionary Associations had been organized since the previous report of the trustees, making the present number of such societies twenty-two. The general receipts of the Convention for the year had been $36,893. Special funds for missions, ministerial relief, or education, had been instituted in connection with sixteen State Conventions, the aggregate amount of which was returned at $195,365. The funds of the General Convention were returned as follow:

Murray Centenary fund	$122,577
Theological scholarship fund......................	22,550
Church extension fund..........................	360
Ministerial relief fund....	10,187
Making the total endowment of the convention	$155,674
Add the total endowment o. the State Conventions	195,365
In all....................................	$350,039

This amount was exclusive of all endowments of subordinate missionary agencies, and of colleges and academies.

The trustees had expended $1,000 in aid of State Conventions, $1,603 for church extension, and $2,223 for church sustentation. According to the returns received, which were incomplete, the amount contributed during the year for the funds and missionary work of the General and State Conventions exceeded $50,000; the contributions for the support of parish services, and the erection and repair of church edifices, were $815,000; for educational purposes, $107,500; making a total, in round numbers, of $1,000,000, or an average of $27 for each family. The educational institutions were represented as being in prosperous condition, with considerable increase in the attendance at some of them.

Woman's Centenary Association.—The Woman's Centenary Association met in Brooklyn, N. Y., Oct. 20. Mrs. M. L. Thomas presided. The receipts of the Association for the year had been $9,657, and the expenditures $3,196.

Universalist Historical Society.—The report made to this society at its meeting, Oct. 21, represented that considerable additions had been made, by gift and purchase, to the library, which now contained about 3,000 volumes.

General Convention.—The General Convention of Universalists met in Brooklyn, N. Y., Oct. 21. Mr. J. D. W. Joy presided. The chief topics of discussion at the business sessions related to the provisions to be made for collecting moneys for the funds of the church. A committee was appointed to make verbal changes in the profession of faith. Resolutions were passed condemning capital punishment, with a specification of the reasons for opposing it; condemning war, and recommending arbitration as a means of settling national disputes; recognizing Dr. Benjamin Rush as the pioneer of the temperance reform and its sequences—total abstinence and prohibition; and favorable to the making of provision for looking after persons, so that they shall not be lost to the church, who, having been members of a parish in one community, move into another parish. A plan was considered for the organization of a Sunday-School Superintendents' Bureau of Exchange. Mr. J. D. W. Joy, who had been President of the Convention for eleven years, declined a re-election to that office, and the Rev. E. C. Sweetzer, D. D., was chosen President of the Convention for the ensuing year.

URUGUAY, a republic in South America. Area, 69,835 miles; population in 1883, 520,536. Montevideo, capital of the country, had in 1884 a population of 104,472.

Government.—The President is Gen. Máximo Santos, whose term of office will expire on March 1, 1886. The Cabinet is composed of the following ministers: Foreign Affairs, Dr. Manuel Herrera y Obes; Finance, Dr. J. L. Terra; Interior, Señor E. Zorrilla; War and Navy, Gen. Tajes; Justice and Public Instruction, Señor J. L. Cuestas. The United States Minister is Hon. John C. Bacon; the American Consul at Colonia, Mr. B. D. Manton, and at Montevideo Mr. T. R. Jernigen. The Uruguayan Minister at Washington is Señor E. M. Estrazulas, and the Consul at San Francisco Mr. J. G. Grace.

Army and Navy.—The standing army comprised in 1885 three battalions of sharp-shooters, five regiments of horse, and two regiments of artillery, together 3,061 men and 12 officers. There is, besides, a police force of 3,200 men, and a National Guard of 20,000 men.

The navy is composed of three small steamers, two gunboats, and a coasting craft.

Finances.—The public debt on Jan. 1, 1884, stood as follows:

Consolidated home debt	$38,938,184
Foreign indebtedness	16,297,344
International indebtedness	4,040,375
Total	$59,275,903

There was besides at that date paper money in circulation to the amount of $1,696,892.

Commerce.—Uruguayan foreign trade developed during the four years 1881–'84 as follows:

	1881.	1882.	1883.	1884.
Import	$17,900,000	$18,200,000	$20,300.000	$24,600.000
Export	20,200,000	22,100,000	25,200,000	24.800,000
Total trade	$38,100,000	$10,300,000	$55,500,000	$49,400,000

The American trade was as follows:

FISCAL YEAR.	Import into the United States.	Domestic export from the United States.
1885	$2,734,617	$1,601,759
1884	2,128,981	1,239,923
1883	3,980,110	1,385,755

Communications.—There were in operation in 1885, altogether, 265 miles of railway.

The length of land lines of telegraph in operation in 1883 was 669 miles, and there was besides a cable 101 miles in length.

The number of post offices was 234 in 1885.

Live-Stock.—Up to the end of June, 1885, the *saladeros* of Uruguay had slaughtered about 800,000 head of cattle, representing a value of $16,000,000. To this must be added 500,000 hides of animals slaughtered for consumption, and the wool and produce of about 15,000,000 sheep.

The Liebig Company at Fray-Bentos, founded twenty-two years since, has slaughtered for use in its factory 716,004 head of cattle in the past five years. The meat is boiled under a steam pressure of 75 pounds to the square inch. The broth thus obtained is conducted through pipes into tubs, where the greasy substances are skimmed off; it is then made to flow into clarifying tanks, where a further cleansing process takes place. Thence it is pumped into cooling vats where it is filtered, and then through evaporation converted into the jelly in which it appears in commerce after being decrystallized in large tubs. A rival company, the "Trinidad," has been started on the banks of the San José river, forty miles from Montevideo, which consumes 250 head of cattle daily.

The Great Montevideo Breakwater.—The port of Montevideo is conceded to be the best between Rio de Janeiro and Bahia Blanca in the Argentine Republic; but it suffers from being exposed to southerly winds. The harbor itself is easily accessible, has any amount of space, and good anchorage-ground. These winds from the south are, it is true, confined to certain months, from May to August, but they are then so frequent that the difficulties arising from this cause are statistically proved to fill one third of the year. The great breakwater to be built by London contractors is to do away with this obstacle. It is to be constructed of solid stone after the model of the one at Plymouth, England. It is to stretch from the promontory on which Montevideo is situated to a corner of the bay opposite, a distance of two miles and a half across the harbor, but leave on both sides room enough for the passage of vessels. The cost, without counting that of dredging the new entrance, will amount to £3,000,000, on which the Government will pay 8¼ per cent. interest.

The South American Commission.—The South American Commission from the United States was cordially received by the Government at Montevideo on June 8. It was asked to use its influence in favor of extending the American cable system to Uruguay. The commission left for Rio de Janeiro on June 18, and reported to Congress as follows:

> We unhesitatingly say that in our opinion the United States can in a few years advance to a position as superior to any other nation in its commerce with this country as it is now inferior. The object can be reached by placing a steamship line on such a basis that it can carry freight and passengers at as low a rate from Montevideo to our ports as they are now transported to Europe. The President of Uruguay expressed a desire to negotiate a treaty with the United States as soon as the latter should request it. He was desirous of finding a basis for a mutual concession out of which might come a greater commerce between the two countries. The people of Uruguay preferred to do their business with our country if it could be done on as reasonable and profitable terms as with any other. He also favored the calling of a convention of all the republics of the western hemisphere by the United States.

UTAH. Territorial Government.—The following were the Territorial officers during the year: Governor, Eli H. Murray; Secretary, Arthur L. Thomas; Treasurer, James Jack; Auditor, Nephi W. Clayton; Superintendent of Public Instruction, L. G. Nuttall. Judiciary, Supreme Court: Chief-Justice, Charles S. Zane; Associate Justices, Jacob S. Boreman and Philip F. Emerson, succeeded by Orlando W. Powers. The Auditor, Treasurer, and Superintendent of Public Instruction are holding under an election by the people, although it has been decided that under the organic act they should be appointed by the Governor, with the consent of the Council.

Financial.—Utah has no Territorial debt. The following table gives figures for two years:

	1883.	1884.
Assessed value of property.	$30,834,425 00	$38,452,987 00
Amount raised by taxation.	184,948 06	229,576 86
Receipts	184,948 06	230,717 86
Expenditures	135,589 34	236,160 89

The rate of taxation is six mills on the dollar, half for common schools and half for general purposes.

Mining.—The following is a recapitulation of the mineral product for 1884:

4,840,987 lbs. refined lead, at 3½ cents per lb.	$169,434 54
56,023,893 lbs. unrefined lead, at $35 per ton.	980,418 12
5,669,488 ozs. fine silver, at $1.08 per oz.	6,123,047 04
5,530 ozs. fine gold, at $20 per oz	110,600 00
63,372 lbs. copper, at 10 cents per lb.	6,337 20
Total export value	$7,389,836 90

Computing the gold and silver at its mint valuation and other metals at their value at the seaboard, it would increase the value of the product to $9,301,508. The estimated product for 1885 is about the same as that of 1884.

Salt.—In 1884 there was manufactured from the waters of Great Salt Lake 17,000 tons of salt, which was shipped to the different mining districts for milling purposes in the reduction of ore. In addition to this, a considerable amount is manufactured for domestic use.

Education.—The public-school system is very generally established over the Territory, but is a source of great complaint by a large number of the people who are taxed for the support of schools into which their children never enter. This has stimulated effort to supply schools independent of Mormon control, and has resulted in the different religious denominations of the country establishing schools throughout the Territory. The public schools receive as a body the Mormon children, and the schools established by the different religious denominations receive the children of the non-Mormons. Many children of Mormon parentage are taught in the latter-named schools, they being preferred because the teachers are better qualified and the schools better. The Methodists have 13 schools, with 869 pupils; the Roman Catholics 4, with 610 pupils; the Baptists 2, with 205 pupils; the Episcopalians 5, with 795 pupils. The New West Education Commission is virtually the work of the Congregational Church. It had during the last school year enrolled in Utah and in one school just across the Idaho line, 1,915 pupils, with an average attendance of 1,113 in 28 schools; of these 1,915, 1,250 were of Mormon families. On Oct. 8, 1885, there were 39 teachers at work in Utah. The Presbyterians are carrying on 31 day schools in Utah, in which about 900 children and youth are being educated, 75 per cent. of them being children of Mormon parentage.

Insane Asylum and Penitentiary.—During the year an insane asylum was completed and opened. It has fine surroundings, overlooking the city of Provo and Utah Lake. The Penitentiary is inadequate to the needs of the Territory.

Polygamy and the Edmunds Law.—The report of the Utah Commission, under date of Oct. 28, 1885, says:

> The usual annual revisions of the Utah registration lists for the present year were duly and thoroughly made at the time and in the manner and form prescribed in the local registration law, by officers appointed by this board, and the general election following such revisions was held on the 3d day of August last. The principal officers chosen at that election were commissioners to locate university lands, members of the Council and House of Representatives of the Legislative Assembly, also county and precinct officers throughout the Territory. No person living in the practice of polygamy was allowed to register or vote, nor was any such person elected or commissioned to any office at this or any previous election held under the supervision of the commission. Nevertheless, nearly all the officers chosen at the last election, as in the others, are Mormons, who, while they do not actually live in polygamy, subscribe to the doctrine of polygamous marriages as a divine revelation, higher and more binding upon the conscience than any human law, local or national. One very notable exception, however, to this general rule was furnished in the last election in the county of Summit. In this county the entire non-Mormon ticket was elected, and among the officers thus chosen was a member of the House of Representatives of the Legislative Assembly. He is the first person not a member of the Mormon Church and opposed to their system who has been elected in many years.
>
> In a former report we called attention to the fact that a number of suits for damages were instituted in 1882 against the commission by certain Mormon citizens whose names had been excluded from registration, and who were not permitted to vote. The district court decided these cases against the plaintiffs, and on appeal to the Supreme Court of the Territory these decisions were affirmed. An appeal having been taken by the plaintiffs to the Supreme Court of the United States, the decisions of the court below were sustained as to the members of the commission. According to the best information we have been able to obtain, there have been very few polygamous marriages during the present year. It would not be prudent, however, to consider this other than a suspension of the practice resulting from the vigorous enforcement of the law in all its parts, and not an actual surrender occasioned by a general and decided change of sentiment regarding the doctrine itself.

During the past two years there have been 83 indictments for polygamy and unlawful cohabitation, and 23 convictions. At the date of the report, 43 cases were awaiting trial.

The cases of Rodger Clawson and Angus M. Cannon, decided by the Supreme Court of the United States, in April and December respectively, declare the constitutionality of the Edmunds law. Toward the close of the year, there were reports of an intended Mormon rising, and troops were sent to Salt Lake City. In December the grand jury in that city reported that "some time in April or May last an officer of the city government, not connected with the police, with others at present unknown to the grand jury, entered into a conspiracy to open houses of assignation and ill-fame within the city limits, for the avowed purpose of entrapping weak and vicious persons into the commission of offenses against chastity and morality, in order that all such might be exposed and punished in the courts." It is believed to have been designed to entrap and disgrace United-States-officials. One woman was promised $1,000 in the event of her being able to draw the Governor of the Territory into her toils.

At the December session of Congress a bill was reported from the Judiciary Committee by Senator Edmunds, which contains very stringent provisions. It was passed by the Senate early in 1886.

V

VANDERBILT, WILLIAM H., an American capitalist, born in New Brunswick, N. J., May 8, 1821; died in New York city, Dec. 8, 1885. He was the eldest son of Cornelius Vanderbilt, and was sent to Columbia College Grammar School, where he acquired a fair knowledge of the ordinary branches. He was placed at work, while yet a boy, in a ship-chandlery; but when he reached the age of eighteen he obtained a clerkship in the banking-house of Drew, Robinson, & Co., and devoted himself to his new duties with great zeal, and determined to prove that he possessed some at least of the qualities needful to the acquisition of fortune. His salary was small, and his wealthy father made him no allowance. In 1841 he married Miss M. L. Kissam, daughter of a Brooklyn clergyman, and she was her husband's best counselor through life.

Mr. Vanderbilt's health broke down in 1842, and it became imperative upon him to give up sedentary occupations. His father purchased seventy-five acres of unimproved land near New Dorp, Staten Island, and gave it to him. He declined giving or loaning his son money, and left the young man to work his own way. Mr. Vanderbilt mortgaged the land for $6,000, whereupon his father sent him the money, and told him to "go and pay off that mortgage right away." The speedy progress of improvements on the farm, showing good judgment and sound sense, and the popularity that his son was acquiring among his neighbors on the island, afforded much satisfaction to the commodore, and he began to see that he had undervalued the ability of the active and diligent young farmer. Year after year the boundaries of the farm were widened, until they included 350 acres, and the profits of produce, over and above the cost of cultivation, amounted to $12,000 a year.

The Staten Island Railroad, in 1860, by bad management and inefficient directors, was overwhelmed with debts and embarrassments, and it became necessary to put it into the hands of a receiver. Mr. Vanderbilt, though he had had no experience in railroad matters, was well known to the community as a man of rare energy and business capacity, and he was appointed receiver. In two years he had paid off all the claims against the company, brought the road into connection with New York city by an independent line of ferry-boats, and placed it upon a secure financial basis. He was then elected president of the company, and was busily occupied in its service, when, by his father's request, he accompanied a younger brother, broken down by injuries received in the war, to Europe, in the hope of saving his life. He traveled for more than a year with his brother, but to no purpose, and returned home alone. His father was now showing the effects of advancing years, and, being convinced of his son's ability to carry out great railroad projects, he leaned upon him entirely. On returning from Europe, William was elected Vice-President of the Harlem Railroad Company, and thenceforward resided in the city of New York.

In 1865 the commodore secured his son's election as Vice-President of the New York and Hudson River Railroad Company, and was delighted to find that William was able to enter into his plans and effectively carry them into execution. Henceforth, while the commodore lived, no important movement was made without his son's approval. When a controlling interest in the New York Central Railroad had been secured, William suggested to his father that, for convenience and facility in meeting competition, the line from New York to Buffalo should be continuous and under one management. The idea was approved, and in 1869 the Central and Hudson River Companies were consolidated, and a corporation was created having 700 miles of double-track in its main lines and branches. Mr. W. H. Vanderbilt was made its first vice-president and executive officer. Although his father was nominally at the head of affairs, it was chiefly due to his son William that this great property was nearly trebled, and became one of the greatest and most prosperous railroads in the world. The Harlem Railroad also was relieved of all its embarrassments, and made one of the best paying roads in the State.

Commodore Vanderbilt died early in 1877, and bequeathed ninety-five out of a hundred million dollars to his eldest son. The other heirs began a contest for what they deemed their rightful share in the wealth; and William, anxious to prevent making public his father's affairs, offered a compromise, in the payment of a round sum, and the contestants agreed thereto. Although he was enormously wealthy already, Mr. Vanderbilt set to work to secure and increase his millions. He was elected President of the New York Central and Hudson River Railroad in June, 1877, and gave himself industriously to his vast responsibilities. He was also identified with other railroads, viz., the Lake Shore and Michigan Southern and the Michigan Central, of both of which he was president; and he was engaged in many other enterprises, including telegraph and telephone lines, and electric light companies. He allowed himself no rest, and had no time to spare for recreation. He would make a trip across the Atlantic once in a while, but generally returned in the same steamer on which he sailed. In May, 1883, however, the conclusion forced itself upon him that he could no longer safely continue under the pressure of his weighty responsibilities. He resigned the presidency of the roads named above, and his sons, Cornelius and William K., were elected to fill the vacated offices. Practically, however, he continued at the head of the Vanderbilt system, and was always consulted before any important step was taken. Up to the day of his death his thoughts were busy in arranging plans for increasing business facilities and advantages in a new direction. The end came suddenly at the last, and a stroke of apoplexy removed him at once from all further share in this world's affairs.

WILLIAM H. VANDERBILT.

William H. Vanderbilt was reputed to be worth $200,000,000. He leaves a widow and eight children. By his will six of these receive $11,800,000 each. Cornelius receives $58,800,000, and William K., $56,800,000. Mrs. Vanderbilt gets the Fifth Avenue house, all the pictures, etc., with an annuity of $200,000 a year. The amount given to religious and other charities is estimated to be $1,200,000. In 1880 Mr. Vanderbilt presented $100,000 to Vanderbilt University, Nashville, Tenn., for the building of a theological hall; and in 1884 he gave to the College of Physicians and Surgeons, in New York city, $500,000 for the founding of a school of medicine. He was a member and communicant of St. Bartholomew's Episcopal Church, New York, and showed a warm interest in its welfare.

VENEZUELA, a republic in South America. (For area, territorial division, and population, see "Annual Cyclopædia" for 1884.)

Education. — The number of Federal free schools had increased during the last fiscal year from 1,778 to 1,812, and the total number of pupils attending them from 92,661 to 94,821.

Government. — The President is Gen. Joaquin Crespo, whose term of office will expire on Feb. 20, 1886. The Cabinet is composed of the following ministers: Foreign Affairs, Señor Benjamin Quenza; Public Credit, Señor J. A. Valentini; Public Works, Señor Abelardo Arismendi; Finance, Señor Rivas Castillo; Interior, Gen. V. Amengual; Public Instruction, Señor M. F. Pimentel. President of the Supreme Court of the Confederacy, Señor A. A. Silva; Governor of the Federal District, Gen. Bernardino Mirabal. The Minister of the United States at Carácas is the Hon. Jehu Baker; and the American Consul at La Guayra is Scott Bird. The Minister from Venezuela to the United States is Señor A. M. Soteldo. The Venezuelan Consul-General at New York is Señor J. G. Call.

Finances. — When Congress convened on March 2, 1885, the Minister of Finance was not prepared to submit the actual result of the budget for 1883-'84, but said that it kept within the limits of the estimate. The national indebtedness he stated to have been as follows on June 30, 1884:

Foreign 3 per cent. debt	$13,608,080
Consolidated 5 per cent. home debt	7,233,459
Floating debt	991,641
Total	$21,833,180

against $22,838,952 the previous year, showing a reduction of $1,005,772. Twelve per cent. Government bonds to the amount of $800,000 were issued, the proceeds to be used in canceling the fourth issue of treasury notes and paying subsidies to the Puerto Cabello and Valencia Railroad Company.

Army and Navy.—The strength of the regular army is 2,785, of whom 240 are officers. There is, besides, the militia, enrolled in time of revolution or war. The naval force is so far restricted to a few revenue cutters, hardly deserving the name of men-of-war; but the President has asked Congress for authority to build a real man-of-war in view of the renewed revolutionary attempt, taking the coast for its basis.

A Rebellion. — The regenerator and former President of Venezuela, Gen. Guzman Blanco, being absent in Europe as minister of the republic, a formidable attempt at revolution was made, during the last week in June, by three noted rebel chiefs — Gen. Venancio Pulgar, Urdaneta, and Pucido. These men succeeded in raising funds at 15 per cent. interest at Port of Spain, Trinidad, with which they fitted out a steamer, the "Justicia," and another to keep them supplied with coal, the "Oriente." Landing troops at Campano, they obtained possession of that port; but the Government forces attacked and completely routed them on July 3, with a loss of several thousand rebels slain and wounded. When the three defeated leaders perceived that all was lost, they re-embarked with what troops they could gather, and steamed to the island of Margarita, capturing it by surprise and intrenching themselves there. This point they held from July 4 to July 14, when the Government had landed a military force large enough to give them battle and again defeat them. A small Venezuelan man-of-war captured the "Oriente" the same day, while the latter was conveying defeated rebels to Trinidad. The vigor of the Venezuelan troops under Gen. Velutini had thus disconcerted Pulgar's plans from the beginning. Driven to sea, with a large reward offered for the capture of their vessels as pirates, and with their leader in hospital at Port of Spain, the disheartened insurgents made sail from Margarita, on board the "Justicia," for Santo Domingo, where they surrendered to the authorities on July 25.

Public Works. — In October it was reported that the work of building a breakwater at La Guayra was to begin at once. The cost of the breakwater is estimated at $10,000,000. Blocks of concrete weighing 500 tons each will be laid in the sea. No money will be taken from the public treasury. A London company has been formed to carry out the work, and has agreed to accept a certain sum per package for all merchandise going over the breakwater for ninety-nine years.

Mining.—A most important reform the Government proposes in the mining laws of the country. In future, the net product of a mine is to be taxed instead of its merely paying a license. Furthermore, miners are to be allowed to work small mines on Government lands, so that people who are laborious, but can not get capital enough to work mines on an extended scale, may have a chance to acquire some means in a small way. Some idea may be formed of the amount of English capital invested in the gold-mines, from the ensuing list, which does not include the Nasupai mine:

Callao Bis	£180,000
Chile	500,000
New Chile	500,000
New Callao	75,000
Potosi	350,000
New Potosi	300,000
Nouveau Monde	200,000
Victoria	200,000
West Callao	75,000
La Guayana	250,000
New Cicapra and Mercedes	250,000
Nouveau Monde mortgage	70,000
La Concepcion	110,000
Total	£3,060,000

The Callao mine alone shipped in 1883, from Ciudad Bolivar, 5,279 kilogrammes of gold and 2,313 kilogrammes of gold quartz. worth in the aggregate $3,543,383. The decline in the value of copper has not prevented the New Quebrada copper-mine of Venezuela from shipping nearly as much copper as ever, so that the arrivals thence at Liverpool and Swansea during the first ten months of 1885 reached 3,351 tons fine, against 2,950 tons in 1884; 3,470 in 1883, and 2,886 in 1882.

Railroads.—In the summer of 1885 the Government made a contract with Don Benito Roncayolo, granting him concession to build the La Ceiba-Sábana de Mendoza Railway, in the State of Andes, who in his turn contracted for the necessary material with Messrs. A. de Lima & Co., of New York. Simultaneously the Carenero-Paparo Railroad was finished. It is a coast line of 15 miles, but of great importance in its connection with the river Tuy.

Commerce.—The number and tonnage of shipping that entered Ciudad Bolivar in 1884 were as follows:

	No.	Tonnage.	Crews.
American	11	1,550	87
British	15	4,895	187
French	10	1,793	152
German	11	2,690	89
Venezuelan	39	16,611	737
Total	86	27,539	1,252

The American trade with Venezuela in 1885 was as follows: Imports from Venezuela into the United States, $6,309,580; domestic exports from the United States to Venezuela, $2,992,968.

VERMONT. State Government.—The following were the State officers during the year: Governor, Samuel E. Pingree, Republican; Lieutenant-Governor, Ebenezer J. Ormsbee; Secretary of State, Charles W. Porter; Treasurer, William J. Dubois; Auditor, E. H. Powell; Inspector of Finance, Carroll S. Page; Railroad Commissioner, Wayne Bailey, succeeded by Thomas O. Seaver; Commissioner of Taxes, W. P. Dillingham; Superintendent of Education, Justus Dartt. Judiciary, Supreme Court: Chief Judge, Homer E. Royce; Assistant Judges, William H. Walker, Jonathan Ross, H. Henry Powers, Wheelock G. Veazey, Russell S. Taft, and John W. Rowell. No general election was held during the year, and there was no session of the Legislature.

Finances.—For the year ending July 31, 1885, the total receipts were $689,774.24. The total disbursements were $666,613.80. Among the largest items are Auditor's and court orders paid, $325,219.42; and temporary loan paid, $275,310.37. The liabilities, on account of the Agricultural College and United States surplus funds, foot up $155,500.

Agriculture.—The average annual hay-crop for the past decade has been about 1,075,000 tons. The crop of 1885 was about 10 per cent. short —or, in round numbers, 970,000 tons. A succession of dry seasons for several years, and the damage caused by grasshoppers and the white grub in this and previous seasons, have resulted in a diminished yield in some counties. A large second crop of hay was secured. The grain-crop was generally good. Less wheat is raised in Vermont than formerly, many farmers sowing barley or other grain instead. About 100,000 bushels of rye are raised annually in the State. Hops are grown to a limited extent, and a small quantity of tobacco is raised in Windham County. The dairy interest is languishing. Many farmers are abandoning wool-growing and selling their flocks. The following is an estimate of the crops of the harvest of 1885:

	Bushels.	Percentage of yield to a full crop.
Potatoes	4,238,000	90
Oats	4,180,000	115
Corn	2,014,000	90
Wheat	437,500	110
Buckwheat	335,000	105
Barley	242,000	110
Rye	93,000	110

Estimated yield of other farm productions for 1885:

Wool	2,250,000	pounds.
Butter	27,000,000	"
Cheese	1,500,000	"
Maple-sugar	11,500,000	"
Orchard fruits	$500,000	value.

The yield of orchard products was unusually small.

The average maple-sugar crop of Vermont is about 12,000,000 pounds. It is worth more than $1,000,000, and is harvested before the season of planting begins. Vermont produces about one third of the annual maple-sugar crop of the country.

VIRGINIA. **State Government.**—The following were the State officers during the year: Governor, William E. Cameron, Readjuster; Lieutenant-Governor, John F. Lewis; Secretary of State, H. W. Flournoy; Treasurer, Isaac R. Barksdale; Auditor, Morton Marye; Second Auditor, Frank G. Ruffin; Attorney-General, Frank S. Blair; Superintendent of Public Instruction, Richard R. Farr; Commissioner of Agriculture, Randolph Harrison; Superintendent of Land-Office, Joseph A. Wingfield; Railroad Commissioner, George A. Martin. Court of Appeals: L. L. Lewis, B. W. Lacy, R. A. Richardson, T. T. Fauntleroy, and D. A. Hinton.

Legislative Session.—The Legislature met on Dec. 2, and was in session at the close of the year. On the 15th, John W. Daniel. Democrat, was chosen United States Senator. The following State officers were elected: Auditor, Morton Marye; Second Auditor, Frank G. Ruffin; Treasurer, A. G. Harman; Secretary of State, Henry W. Flournoy; Superintendent of Land-Office, Joseph A. Wingfield; Superintendent of Public Instruction, John L. Buchanan; Commissioner of Agriculture, Randolph Harrison; Railroad Commissioner, H. G. Moffett. The new terms begin with 1886.

Finances.—On Oct. 1, 1885, the apparent cash balance in the treasury was $594,687.48; the actual balance by the Auditor's books (the difference being as to warrants issued and not yet presented) was $406,802.73. This, however, does not state the actual condition of the treasury. Some minor items go to reduce the available cash balance in the treasury; but to the credit account must be placed the marketable value of Riddleberger bonds to the amount (face value) of $2,030,943.10, purchased under acts of March 15 and Aug. 25, 1884, which bonds are by law convertible into cash whenever the exigencies of the treasury require it. "The interception of the revenue," says the Governor, in his message of Dec. 3, "by payment of taxes and dues to the Commonwealth in coupons since the last meeting of the General Assembly, has not reached such an extent as to seriously disturb the administration of public affairs. For the fiscal year herein treated the amount of coupons forced upon the treasury in payment of taxes and other dues was $122,000 less than for the preceding fiscal year. It appears that the available funds and convertible property now in the treasury reach, in round numbers, the sum of $1,615,213.89." The amount of the public debt outstanding, other than Riddleberger bonds, is as follows: Principal and interest to July 1, 1882, $28,020,532.83; interest subsequent to July 1, 1882, to and including July 1, 1885, $2,731,699.49—making outstanding, Oct. 1, 1885, $30,752,232.32.

There had been funded up to Oct. 1, 1885, $7,517,032.71 of the old indebtedness, principal and interest, and the amount of bonds and certificates issued under the acts of Feb. 14, 1882, and Nov. 29, 1884, in lieu thereof, was $4,971,590.66, of which there are in the hands of the public creditors, $2,190,514.92.

Oyster Interest.—On this subject the Governor says: "Since 1857 there has been a constant drain upon one of the largest resources of Virginia's wealth. by the absolute destruction of her oyster-beds. It is claimed that the property of the people of Virginia, in the waters of Chesapeake Bay, has been protected since 1882 as never before, and in the mean time the return of revenue up to Sept. 1, 1885, with hardly more than half the collections yet reported, amounts to upward of $26,000—paying largely more than all the expenses of the service."

Education.—An examination of the school statistics for 1883-'84 reveals that the educational inequality between the two races still prevails to a considerable degree, although lessening. Amelia, Appomattox, Brunswick, Campbell, Charlotte, Halifax, Lunenburg, Mecklenburg, Pittsylvania, and Prince Edward Counties contain one sixth of the whole colored population of the State, and one fourth of its colored school population. In Amelia County 52 per cent. of the white school population is enrolled, but only 28 per cent. of the colored. In Appomattox County the proportion of enrollment is 50 per cent. for the one, 33 per cent. for the other. In Brunswick the proportion is 61 per cent. and 49 per cent.; in Campbell, 70 per cent. and 46 per cent.; in Charlotte, 67 per cent. and 36 per cent.; in Halifax, 50 per cent. and 33 per cent. In Lunenburg County the proportion is the same; also in Mecklenburg County. In Pittsylvania County, on the other hand, the proportion is 37 per cent. for the white school population, and 22 per cent. for the colored. In Prince Edward, 52 per cent. for the one, and 34 for the other. Striking a general average for these counties, we find that 55 per cent. of the white school population is enrolled, but only 41 per cent. of the colored. By the last reported school census, that for 1880, there were 240,980 colored children in Virginia of school age. Of these, 103,310 were enrolled at the end of July, 1884—that is, 43 per cent. of the whole. On the other hand, 58 per cent. of the white school population was enrolled—that is, 184,720 out of a school population of 314,638. There was in 1883-'84 a school for every 70 white children, but only one for every 128 colored. In five years, the number of colored children in daily average attendance has trebled, while the number of white children has only doubled. There has been an equally notable increase in the number of colored teachers. The chief normal schools for the education of colored teachers are the Richmond Institute, the Richmond Normal, the Boydton Institute, the St. Stephen's Institute, the Petersburg High-School, the Virginia Normal and Collegiate Institute, and the Hampton Normal School.

Political.—The Republican State Convention met in Richmond on July 16, and nominated a ticket as follows: John S. Wise, for Governor; H. C. Wood, for Lieutenant-Governor; and Frank S. Blair, for Attorney-General. It adopted a long platform, declaring in favor of the following among other things:

For the free ballot, against the Bourbon ballot-killer.

For free schools and increased appropriations for the enlargement and extension of the system, against the Bourbon hostility to free education.

For the enforcement of the Readjuster settlement of the State debt as covering every dollar of Virginia's equitable share of the debt of the undivided State, and the highest rate of interest that can be borne.

For due compensation for all labor impressed for public service, whether on public roads or otherwise.

For biennial elections, so that our State, county, city, and other elections may all occur together.

For the protection of our oyster-beds and fisheries from non-resident invaders.

For every possible encouragement and aid to promote the construction of railroads and other facilities to open up the immense mineral and other resources of the western, southwestern, and other portions of the State.

For money-wages for labor against the Bourbon store-and-order system.

For eight hours as a day for all labor employed on public works, and in mines and manufactories, and by corporations, with weekly payments.

For a State Bureau of Labor Statistics.

For a legal provision securing to all mechanics, laborers, and other workmen the first lien on the assets of employers where they are forced into liquidation.

For a local-option prohibition law.

The Democratic State Convention met in Richmond on July 29, and nominated for Governor, Fitzhugh Lee; for Lieutenant-Governor, John G. Massey; and for Attorney-General, Rufus A. Ayres. Mr. Massey had been a prominent Readjuster. The following are the principal points of the platform adopted:

The Democratic party heretofore pledged its final acceptance of the settlement of the public debt known as the "Riddleberger bill," and its opposition to all further agitation of the question.

The question of the State debt has ceased to be one of dollars and cents. It has become one of State sovereignty.

We renew the pledge and avouch the fact that within the last two years, under Democratic legislation, $275,000 of arrearages to the school fund have been paid.

We favor the furnishing of free books to the pupils of the free schools.

In providing wisely for the instruction of its citizens and generously for the afflicted in mind and body, the Commonwealth should respect the sacred duty which it owes to its needy Confederate soldiers, disabled by wounds or disease.

We recommend to the General Assembly to pass such laws as will permit each county or district to determine for itself whether the sale of spirituous liquors shall be permitted within its limits.

Public policy requires that convict labor should not be brought in competition with free labor.

Eight hours a day for labor upon public works; opposition to all discriminations unjustly bearing upon labor or capital; the enforced payment of money-wages by corporations and the first lien to employés upon their assets; the establishment of labor bureaus for the collection of statistics.

We are unalterably opposed to mixing State with Federal elections, whereby such interference as has been experienced in the past under an ill-advised or corrupt Administration might be possible.

At the election on Nov. 3, the Democratic ticket was successful. The total vote for Governor was 289,071, of which Fitzhugh Lee (Democratic) received 152,544; John S. Wise (Republican), 136,510; scattering, 17.

The Legislature consists of 30 Democrats and 10 Republicans in the Senate, and 70 Democrats and 30 Republicans in the House.

Crops.—In the State the corn and tobacco crops of 1885 were fair, but the wheat-crop was poor. The peanut-crop amounts to about 2,000,000 bushels.

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WASHINGTON. Territorial Government. — The following were the Territorial officers during the year: Governor, Watson C. Squire; Secretary, N. H. Owings; Auditor, T. M. Reed; Treasurer, T. N. Ford; Superintendent of Public Instruction, R. C. Kerr. Judiciary, Supreme Court: Chief-Justice, R. S. Greene; Associate Justices, John P. Hoyt, A. G. Langford, and George Turner. The Legislature met on Dec. 7, and was in session at the close of the year.

General Condition.—On this subject, the Governor, in his report to the Secretary of the Interior, dated Nov. 1, says: "Although speculation has been temporarily checked, the entries of public land less numerous, and the influx of immigrants less rapid, yet the important basilar industries of the country, such as wheat-raising east of the mountains, and lumbering and coal-mining on the western coast, have moved forward with increased momentum, so that the aggregate production has far surpassed that of any former year in the history of the Territory. The new population has largely betaken itself to the country. An immensely increased acreage of wheat has been tilled and an unparalleled crop has been realized. Immense new lumber-mills have been constructed, and the forest has been penetrated with iron tramways for procuring timber. The most valuable veins of coal yet worked have been reached by railway, and their production has been shipped in great quantities to the seaboard. Many miles of railway have been built by the Oregon Railway and Navigation Company, running into the wheat-fields of eastern Washington, and the Northern Pacific Railroad Company has been almost constantly at work on its Cascade division, which now lacks less than 80 miles of grading to complete it."

Financial.—The assessed valuation of property in the Territory for the year 1884 was $50,508,484, and for the year 1885 it was $50,484,437. The decrease is caused by the shrinkage in property valuation and by the non-listing and non-assessment of railroad property.

The rate of taxation for Territorial purposes is 2½ mills on the dollar. The total cash revenue derived from the tax on property for the twenty-one months ending June 30, 1885, is $181,450.58; the disbursements during the same period amounted to $137,166.44, leaving a net excess of receipts over expenditures of $44,284.44, to which may be added the cash in the treasury, Sept. 30, 1883, leaving on June 30, 1885, a cash balance in the treasury of $72,597.27, exclusive of the sum of $8,503.83, collected under a special tax levied for building a new Territorial Penitentiary.

The following statement shows the number of acres of land assessed, the total amounts and assessed value of all property returned by the several counties, and the taxes levied thereon, in kind and totals, for 1884 and 1885:

	1884.	1885.
Acres of land assessed.....	3,457,952	3,754,564
Value of real estate........	$25,520,943 00	$24,006,044 00
Value of improvements to real estate...............	7,142,674 00	7,318,722 00
Value of personal property.	17,575,401 00	18,890,815 00
Value of all taxable property	50,508,484 00	50,484,437 00
Penitentiary fund tax levy.	12,618 39	12,805 47
Territorial tax levy........	126,235 95	126,200 63
County tax levy...........	327,606 31	284,931 47
School tax levy.	206,174 83	199,132 77
Polland road poll-tax levy..	48,307 00	58,972 75
Special tax levy	28,644 20	19,382 32
Road and bridge tax.......	77,056 37	86,322 72
Total tax levy.............	823,783 80	724,065 75

For 1885 the taxation returns are not complete.

Population.—The total population in 1880 was 75,116. The population in 1885 was 129,438, of whom 78,738 were males, 50,700 females, 123,089 white, 104 black, 75 mulattoes, 57 Kanakas, 3,276 Chinese, 2,786 Indian half-breeds, 36,172 married (three counties missing). Citizens of the United States over twenty-one years of age (four counties wanting), 32,499 males and 16,174 females. The Governor thinks the census of 1885 imperfect, and that the actual population is 175,000.

The largest town is Seattle, with a population of about 12,000; Tacoma comes next, with 6,936 inhabitants. Walla Walla is the chief town of eastern Washington. Other towns are Vancouver, about 3,000 inhabitants; Olympia, 2,500; and Port Townsend, 2,000.

Railroads.—The Oregon Railway and Navigation Company operates 259·5 miles of railroad within the Territory as follows: Main line, standard gauge, 227·7 miles; sidings, 23·4 miles; narrow-gauge line, 6 miles; narrow-gauge sidings, 2·4 miles. It is extending its branches into the wheat regions of the eastern part of the Territory; has completed its branch from Colfax to Moscow, and is now building from Starbuck to Pomeroy.

The Northern Pacific Railroad Company now operates 455·9 miles of railroad within the Territory. During the year it completed 62 miles.

The Columbia and Puget Sound Railroad Company (narrow gauge) now has in operation 44·6 miles of main line and 5·25 miles of sidings. The line from Seattle to Franklin, 33·6 miles, was completed in January, 1885. The branch from Renton to the New Castle mines, eight miles, has been operated for several years.

The Puget Sound Shore Railroad Company operates a standard-gauge road from Seattle to Stuck Junction, 23·5 miles, in connection with the Northern Pacific Railroad, from Stuck Junction to Tacoma.

The Olympia and Chehalis Valley Railroad, narrow gauge, about fifteen miles in length, connects Olympia on Puget Sound with the Northern Pacific Railroad at Tenino.

Counting the newly constructed road and that nearly completed, there are now in all 866 miles of railroad in the Territory, of which 804 miles are operated.

Navigation.—There are 92 steam-vessels, ranging in size from the 5-ton propeller to the steamer of 1,100 tons, now registered at the office of the collection district of Puget Sound, all of which are employed in the domestic freight and passenger traffic of Puget Sound alone. There were 169 vessels, aggregating 47,657 tons, documented at Port Townsend for the fiscal year ending June 30, 1885. Of this number, 89 were sailing-vessels and 80 were steam-vessels. There were 14 new vessels built during the year ending June 30, 1885, of which 8 were steam-vessels, amounting to 675·27 tons, and 6 were sail-vessels amounting to 967·02 tons; making a total of 1,642·29 tons.

Coal.—So far, the important coal-fields have been found in western Washington, and these chiefly in and near the Puget Sound basin. The first discovered were the coal-mines of Bellingham Bay, near the north boundary of the Territory. These were profitably worked for many years, and until other coals of a better quality were found. South of Olympia, in the valley of the Skookum Chuck and the Chehalis, is another field. East of Seattle and of Lake Washington are what are known as the Seattle mines, which have been more thoroughly and extensively worked than any others. These veins run eastward into the Issaqua valley, and probably still farther.

The Renton and Talbot coals, about six miles south of the Seattle mines, may be considered as a part of the Lake Washington coal-field. The Renton Company is working the Talbot coal-vein, from which they obtained an excellent article of lignite or brown coal. All the coals mentioned thus far belong to this class.

Next in importance to these are the Puyallup coal-fields, spreading in various directions along Carbon river up the South Fork of the Puyallup, on Flett Creek and South Prairie Creek. The veins of coal seem to be quite numerous, and differ widely in character; most of them are bituminous; a few semi-bituminous, or between lignite and bituminous.

The coals of this region, where the veins are clean, are superior in quality to the coals previously mentioned.

There are three distinct collieries in this region: one at Wilkeson, on Flett Creek, the second at Carbonado, on Carbon river, and the third on South Prairie Creek.

The production of the Carbon Hill mines has reached 1,000 tons per day, and these may perhaps be considered the largest of the mines now worked, although the difference of output between them and the Seattle or New Castle mine is not very great.

The latest discovered and probably the most valuable coal-field is that known as the Cedar or Green river. This lies to the east and south of Lake Washington, and is doubtless a continuance, in some measure at least, of the most easterly veins found on the Puyallup. The coals are bituminous.

A few miles from Renton, on Cedar river, is the MacAllister vein or mine, on which work has recently been commenced, and it gives promise of being an excellent coal. It seems to be rather intermediate between lignite and bituminous in its quality.

The coal discoveries on the Skagit river, not extensive as yet, form a link in the chain that reaches from Bellingham Bay on the north to Chehalis valley on the south.

The total shipment for the Territory for the year ending June 30, 1885, is 380,250 tons. Adding the home consumption to this, the total mine output will be about 410,000 tons.

Indians.—In the Territory are six full agencies, comprising sixteen reservations, besides Moses' Reservation, which is in charge of a special Indian agent. The total Indian population last year was about 11,000. Of this number probably not more than three fifths live on the reservations, while the remaining two fifths either roam about or have homes of their own on homesteads or land purchased by them, or in villages near white settlements. The whole amount of land reported as being included in all these reservations is 6,330,125 acres.

Education.—The following is a condensed report of statistics of public schools for the year ending June 30, 1885:

Raised for school purposes	$273,962 86
Paid for teachers' wages	194,787 29
Paid for rent of school-rooms	1,077 85
Paid for repair of school-houses	11,114 70
Paid for school furniture	11,318 09
Paid for fuel, etc.	21,513 50
Paid for school-house sites	2,562 78
Paid for buildings	35,889 65
Total for school purposes	287,029 33
School funds to credit of Territory at close of year	70,028 40

Children enrolled in public schools	26,497
Children enrolled in private schools	1,836
Children not attending school	8,923
Total	37,256

There are twenty-four private institutions of learning, consisting of colleges, seminaries, academies, and other institutions of a higher order, at which are in attendance 1,416 pupils under the instruction of ninety-one professors and teachers. The Territorial University is at Seattle. Departments of law and medicine have been recently added to it.

Newspapers.—There are fifty-three newspapers published in the Territory, of which nine are dailies.

Banks.—There are fifteen national banks; aggregate capital, $1,020,000.

Chinese.—In the fall, demonstrations were made against the Chinese, with a view to driving them from the Territory. Perhaps the most marked instances of violence occurred at Seattle and Tacoma. On this subject the Governor says in his report:

> By the Territorial census of 1885 there were 3,276 Chinese residents in the Territory. Many of them have heretofore been usefully employed as servants, and as laborers in the mines and on the railroads and public works. The hostile feeling against Chinese has been greatly increased by reason of failure on the part of the Government to adequately enforce the restriction act, large numbers of Chinese having stolen into the Territory from the neighboring province of British Columbia in violation of law.

WEST INDIES. British. *Bahamas.* — This group is composed of about twenty inhabited islands, and an immense number of islets and rocks. The principal islands are New Providence, containing the capital, Nassau; Abaco; Harbor Island; Eleuthera; Inagua; Mayaguana; Andros Island; Great Bahama; Ragged Island; Rum Cay; Exuma; Long Island; Crooked Island; Acklin Island; Long Cay; Watling's Island; Cat Island, now known as St. Salvador; the Berry Islands; and the Biminis.

By the census of 1881, the population was 43,521.

The Governor and commander-in-chief is Vice-Admiral H. A. Blake; the Colonial Secretary, R. H. Sawyer. The Governor is aided by an Executive Council of nine members, and there is a Representative Assembly of twenty-nine members.

The public debt amounted in 1885 to £48,626.

There are eleven colonial custom-houses and ports of entry in the Government of the Bahamas.

Considerable quantities of pineapples, oranges, and sponges are exported, chiefly to England and the United States. The pineapple-crop is very precarious. The industry of salt-raking has ceased to be remunerative, owing to the high protective duties imposed on salt by the United States. Cocoanut-planting is carried on extensively.

Bermudas.—This group has an area of 19¼ square miles.

By the census of 1881, the population was 14,314, of whom 5,384 were white and 8,564 colored, including 366 civilians employed at naval and military establishments.

There are 24 public schools attended by 1,091 pupils, and 94 private schools.

The Governor, commander-in-chief, and vice-admiral is Lieut.-Gen. Thomas Lionel J. Gallwey. The Legislative Council and Executive Council are appointed by the Crown, the Chief-Justice being President *ex officio.* The Assembly, elected for seven years, is composed of thirty members. The Consul for the United States at Hamilton is C. M. Allen.

The Cambre Basin, on Ireland Island, is a large, artificially constructed basin, with strongly built piers. Here the famous floating dock "Bermuda," the largest in the world, has been placed. The dock-basin is 52 feet below low-water mark, 1,200,000 cubic feet of sand and coral rock having been dredged. The dock's dimensions are:

Length over all	381 feet.
Length between caissons	330 "
Breadth over all	123 feet 9 inches.
Breadth inside walls	84 feet.
Depth over all	75 "
Total weight	8,340 tons.

The islands raise early vegetables of unsurpassed quality, chiefly shipped to New York.

The revenue of Bermuda in 1884 was £28,564.

The importations into Bermuda in 1884 amounted to £238,701.

Jamaica.—The extreme length of Jamaica is 144 miles, its greatest width 49 miles, and its least width 21½ miles. The total area is 4,193 square miles, of which only about 646 square miles are flat; the rest of the island is mountainous, the highest elevation above the sea being the Blue mountain, Western Peak, 7,360 feet.

The population in 1885 was estimated at 591,617. The census of 1881 showed a white population of 14,432; coolies, 11,016; and Chinese, 99; the remainder being colored. By the census of 1881 the population of the capital, Kingston, was 38,566; of Port Maria, 6,741; of Montego Bay, 4,651; of Spanish Town, 5,689; of Falmouth, 3,029; and of Savanna-la-Mar, 2,498.

The number of public schools had increased from 286 in 1868 to 681 in 1884, and the number of pupils from 14,453 to 42,409. A Government scholarship of the annual value of £200, tenable for three years, is open to public competition in each year by boys born in Jamaica.

The Governor of Jamaica is Gen. Sir Henry Wylie Norman, appointed Captain-General and Governor-in-Chief, Oct. 23, 1883. The United States Consul at Kingston is Francis B. Gallery.

On Sept. 30, 1884, the debt of Jamaica was £1,243,900.

In Jamaica the revenue is raised at the rate of 20*s.* 9*d.* per head of population; in Trinidad the rate is 60*s.* 9*d.*; in Mauritius, 36*s.* 8*d.*; in British Guiana, 32*s.* 1*d.*; and in Guadeloupe, 38*s.* 3*d.*

The new specific duties proposed to be levied in the place of existing ones, and expected to yield £152,000 annually, are: On lard, 4*s.* 2*d.* the 100 pounds; tallow candles, 6*s.* 3*d.*; other candles, 16*s.* 8*d.*; soaps, 4*s* 2*d.*; gunpowder for blasting, etc., 41*s.* 8*d.*; gunpowder for sporting, 1*s.* per pound; unmanufactured tobacco, 5*d.* per pound; manufactured tobacco and snuff, 1*s.* ½*d.*; cigars and cigarettes, 8*s.* 4*d.*; opium, 10*s.* 5*d.*; matches, per gross, 2*s.* 1*d.*; fire-arms, per barrel, 4*s.* 2*d.*; lumber, spruce, and white pine, the 1,000 feet, 8*s.* 4*d.*; pitch-pine, 12*s.* 6*d.*; shingles, cedar, and spruce, 4*s.* 2*d.*; all other, 6*s.* 3*d.*; and cement, per barrel, 2*s.* 6*d.* All other goods, either 2 or 10 per cent. ad valorem, calculated to produce £58,000.

The Department of Public Gardens and Plantations spent £5,386 in 1884. The several establishments are as follow: The Botanic Garden at Castleton; the Government Cinchona Plantation in St. Andrew's Parish; the Hope Nurseries, near Kingston; the Palisadoes' Plantation, near Kingston; the Kingston Parade Garden; the Botanic Garden at Bath; the King's House Gardens and Grounds. The Government cinchona plantations have proved a brilliant success since their foundation in 1865. They cover 250 acres, and cost in the aggregate £23,000. During the past five years they have yielded returns to the extent of £13,000. The export of cinchona-bark from Jamaica to the end of September, 1884, was 75,533 pounds, of the value of £16,327. Among private planters there are about 800 acres now being planted with cinchona.

The Rio Cobre Irrigation Canal, irrigating 30,000 acres in the plains of St. Catherine's, near Spanish Town, is over thirty miles long, cost £120,000, and involves an annual expenditure for maintenance and management of only 1¼ per cent.

The Government Railway, purchased from the Jamaica Railway Company in 1879 for the sum of £94,400, extends from Kingston to Old Harbor, 23 miles, with a branch to Angels, 3 miles. The Government has ordered surveys and estimates for extending the line from Old Harbor, through Clarendon, to Porus in Manchester, 24½ miles, and from Angels, through St. Thomas-in-the-Vale, to Ewarton, 14¼ miles. The line from Old Harbor to Porus was opened to traffic on March 2, 1885, and the Ewarton extension was also completed in the same year.

There are in operation in the island 93 post-offices and 41 postal telegraph offices. The postage is one penny a half-ounce, and the charge for telegrams one shilling for twenty words. The West India and Panama Telegraph Company has its office at Kingston.

The lines of mail steamships touching regularly at Kingston are: Royal Mail Steam Packet Company, West India and Pacific Steamship Company, London and Balize Line of steamers, Compagnie Générale Transatlantique, Cunard Steamship Company, Atlas Steamship Company, Jamaica Coastwise Steamship Service, Glasgow Line, and Clyde Line.

There are published in Jamaica twenty-one newspapers, of which six are daily.

In 1884 property-tax was paid on 136,880 acres under cultivation; 122,959 in Guinea-grass; 332,568 common pasture, including lands in pimento; and 1,335,405 acres wood and barren. Of the cultivated lands, 42.518 acres were in sugar-cane, 20,731 in coffee, 282 in cocoa, 5,000 in cinchona, 171 ginger, 13 arrowroot, 857 Indian corn, 6 peanuts, 2 cotton, 62 tobacco, 155 vegetables, 72,084 ground provisions, and 2,328 in pimento.

In 1884 there were in operation 189 sugar estates, the largest of which turned out 520 hogsheads of sugar and 314 puncheons of rum.

The imports in 1883–'84 amounted to £1,548,708; the exports to £1,483,989. Of bananas alone, nearly all to the United States, shipments were 1,842,934 bunches, of the value of £191,972. There is a rapid increase in the export of oranges, pineapples, and yams.

Danish.—The area of Ste. Croix is 218 square kilometres; St. Thomas, 86; and St. John, 54. Population of Ste. Croix, 18,430; St. Thomas, 14,389; St. John, 944; together, 33,763. There are 4,862 Lutherans, 5,881 Moravians, 11,344 Episcopalians, and 10,025 Roman Catholics.

Financially the islands form two groups, viz.: (1) Ste. Croix; (2) St. Thomas and St. John; each group with a separate treasury and with separate revenue and expenditure. For each group the yearly revenue and expenditure average between $150,000 and $200,000. All revenues accrue to, and all expenses are defrayed by, the colonial treasuries, which are so far independent of the treasury of the mother-country.

The Minister of Finance prevailed upon the Danish Parliament to reduce the duty on sugar and molasses coming from Ste. Croix 8 per cent., from April 1, 1885, to March 31, 1890, in view of the unprofitable nature of sugar-making in the island at ruling low prices.

The American trade with the Danish West Indies has been as follows:

FISCAL YEAR.	Imports into the United States.	Domestic exports.
1883	$384,003	$694,565
1884	387,863	578,997
1885	336,303	571,103

The amount of sugar imported from Ste. Croix in 1885 was 10,048,008 pounds, worth $250,862; molasses, 238,514 gallons, worth $40,692; rum, 36,458 gallons, worth $16,643.

Dutch.—(For details relating to area, see "Annual Cyclopædia" for 1883.) In 1885 the population was distributed as follows: Curaçoa, 25,015; Bonaire, 4,031; Aruba, 6,177; St. Martin's (Dutch portion), 3,391; St. Eustatius, 2,460; and Saba, 2,370; together, 43,444. Of this population, 41,783 were natives of the islands.

The Governor of Curaçoa is N. van den Brandhof. The American Consul at Curaçoa is Almon Barnes, and at St. Martin's, D. C. von Romondt.

Among the chief products of the island there were: dividivi, 382,180 kilogrammes; Indian corn, 298,546 litres; sea-salt, 13,000 casks, and 3,498,200 litres in bulk.

A terrible prolonged drought visited the island of Aruba in 1885, and the famine-stricken population had to appeal to Curaçoa and the mother-country for food.

The import of merchandise into Curaçoa amounted in 1884 to 3,443,594 guilders' worth.

The American trade with the Dutch West Indies has been as follows:

FISCAL YEAR.	Imports into the United States.	Domestic exports from the United States.
1885	$386,668	$658,853
1884	647,592	580,115
1883	882,058	579,690

French. *Martinique.* — The area of Martinique is 988 square kilometres; population, Dec. 31, 1884, 167,679.

In 1883 there were 510 sugar estates, 168 coffee estates, and 19 cotton plantations; in 1884, 519 sugar estates, 154 coffee estates, and 24 cotton plantations.

A law school was created by decree of Jan. 20, 1883, at Fort de France, the number of students in 1884 being 156. There is a lyceum at St. Pierre, founded by decree of May 2, 1881, and an institute for young ladies at the Mouillage, inaugurated on Nov. 6, 1883. There are two normal schools at St. Pierre, one for boys and one for girls, and spread over the island 36 public schools, attended by 6,993 pupils.

The Governor is M. V. G. Allègre. The American Consul at Martinique is M. Garasche.

The imports and exports have been as follow:

FISCAL YEAR.	Imports.	Exports.
	Francs.	Francs.
1883	32,888,561	32,826,084
1884	27,882,504	26,240,398
Decrease	5,006,057	6,585,686

The exports embraced the following products of the island:

ARTICLES.	1883.	1884.
Refined sugar, tons	28,872	34,897
Raw sugar, litres	17,985	14,473
Molasses, litres	5,121	58,375
Rum, litres	12,636,850	17,624,760
Coffee, tons	2	3
Cocoa, tons	530	481
Logwood, tons	226	365

Guadeloupe.—The area of Guadeloupe and dependencies is 1,870 square kilometres; population, 197,896. The island is divided into halves by a creek. Basse Terre, the more important portion commercially, is well watered. Grande Terre lacks water-courses, but is the great center of sugar production. The dependencies are: Marie Galante, producing about 1,000 tons of sugar, Les Saintes, Désirade, St. Martin's, and St. Bart's.

The Governor is M. Léonce Laugier. The American Consul is Charles Bartlett.

The value of rural property amounts to about 145,000,000 francs, 63,000,000 francs' worth being under cultivation, 70,000,000 constituting buildings and sugar-houses, and 12,000,000 cattle and draught-animals. There are 1,651 sugar estates, employing 52,294 field laborers. These estates produced, in 1883, 43,168 tons of refined sugar; 14,615 tons of raw muscovado; 1,743 tons clayed sugar; 70,815 hectolitres of molasses; and 24,130 hectolitres of rum; total value, 44,377,700 francs. The cost of production was 21,460,500 francs, leaving a net profit of 22,917,200 francs. The island has 761 coffee estates, employing 6,206 hands, and turning out, in 1885, 705 tons, worth 1,550,000 francs, while the cost of production was 1,050,000 francs.

Guadeloupe exports some logwood, tortoise-shell, annotto, and preserved fruits. The annotto production has been on the increase.

The imports in 1883 amounted to 26,500,000 francs, and the exports to 31,900,000. The American trade with the French West Indies has been as follows:

FISCAL YEAR.	Imports into the United States.	Domestic exports from the United States.
1884	$3,136,402	$1,790,584
1885	1,147,515	1,394,101

Guiana.—The area of Guiana is 121,413 square kilometres; population, 24,656. The Governor is M. Isidore Chessé. The American Consul at Cayenne is P. Decomis. The income of the colony, in 1884, was 2,123,000 francs, and the outlay 3,346,000 francs.

Although intrinsically a rich colony, abounding in gold, and having a fertile soil and valuable forests, it has advanced very little in productiveness and commercial intercourse.

Gold was discovered in the Appronage district as early as 1855. It is in part placer-gold and in part quartz-gold. In 1883, 6,543,000 francs' worth were produced.

The forests of French Guiana begin about thirty miles inland, and thence stretch into the interior in impenetrable fastnesses. There are about 150 valuable woods.

The Maroni Agricultural Company of French Guiana produces valuable fiber from the ramie and other plants. The number of plantations did not exceed 1,427 in 1883, and they only employed 4,100 field-hands taken together.

The American trade with French Guiana has been as follows:

FISCAL YEAR.	Imports into the United States.	Domestic exports from the United States.
1884	$2,321	$102,072
1885	1,803	107,492

Spanish. *Porto Rico.*—This is the smaller of Spain's transatlantic possessions in the West Indies; area, 9,315 square kilometres; population in 1885, 810,394. St. John's, or San Juan de Puerto Rico, the capital, has a population of 25,685; Ponce, 39,052; Mayaguez, 26,705; Arecibo, 26,147; San German, Jauco, and Juana Diaz, over 20,000 each.

The Captain-General is Don Luis Dabán. The American Consul at St. John's is E. Conroy.

During the latter half of the year the island was visited by a terrible drought and dearth of potable water. In Aguadilla and Arecibo some persons perished from thirst, and the situation of many districts would have become critical but for the energy displayed by the Captain-General, who made a trip through the portions of the island where immediate assistance was most needed, took the necessary measures, and distributed funds where wanted.

Railroad-building has not been attempted in Porto Rico; but there are in operation 473 miles of telegraph.

The peninsular and foreign trade movement in Porto Rico for two years was:

FISCAL YEAR.	Imports.	Exports.
1884	$13.132,292	$11,618,883
1883	13,785,843	11,807,720

The chief articles exported during 1884 were:

Sugar	79,738	tons,	worth	$5,182,976
Coffee	17,071	"	"	4,779,742
Molasses	30,864	"	"	740,744
Tobacco	1,758	"	"	573,072

The American trade with Porto Rico has been as follows:

FISCAL YEAR.	Imports into the United States.	Domestic exports from the United States.
1884	$6,890.456	$2,188,609
1885	6,104,263	1,533,177

The American exports embraced 78,534 barrels of flour, 466,699 gallons of refined petroleum, and 5,713,285 pounds of provisions of all sorts.

WEST VIRGINIA. State Government.—The following were the State officers during the year: Governor, E. Willis Wilson, Democrat; Secretary of State, Henry S. Walker; Treasurer, William T. Thompson; Auditor, Patrick F. Duffy; Superintendent of Free Schools, Benjamin S. Morgan; Attorney-General, Alfred Caldwell. Supreme Court of Appeals: President, Okey Johnson; Judges, Samuel Woods, Adam C. Snyder, and Thomas C. Green. In May the seat of government was removed from Wheeling to Charleston.

Legislative Session.—The Legislature met on Jan. 14, and adjourned on Feb. 27. The following are among the acts passed:

Amending the election law so that general elections shall be held on the Tuesday next after the first Monday in November.

Authorizing the State Superintendent of Free Schools to contract for the supply of class-books to be used in the free schools of the State.

Amending the existing law so that the term of office of the Governor, State Superintendent of Free Schools, Treasurer, Auditor, and Attorney-General shall begin on the 4th of March next after their election; of members of the Legislature, on the 1st day of December next after their election; and of judges and county officers, on the 1st day of January next after their election.

Authorizing any person or persons or corporations to construct, and to condemn land for the construction of, lateral railroads, and regulating traffic over the same.

Giving railroad companies, organized since March 14, 1881, two years within which to commence construction, three years to expend thereon 10 per cent. of the capital stock actually subscribed, and ten years to complete and put the road in operation.

Relating to corporations for the mutual relief and protection of their members, insuring lives on the assessment plan.

Amending the tax and assessment laws.

To enlarge the duties and powers of Boards of Education in reference to the purchase of text-books prescribed by law for use in the free schools of the State.

To prevent county courts from abusing their powers.

To prevent the manufacture and sale of mixed and impure butter and cheese, and imitations thereof.

Making it unlawful for certain stock to run at large, and making the owner thereof liable in damages for injury or destruction of property thereby.

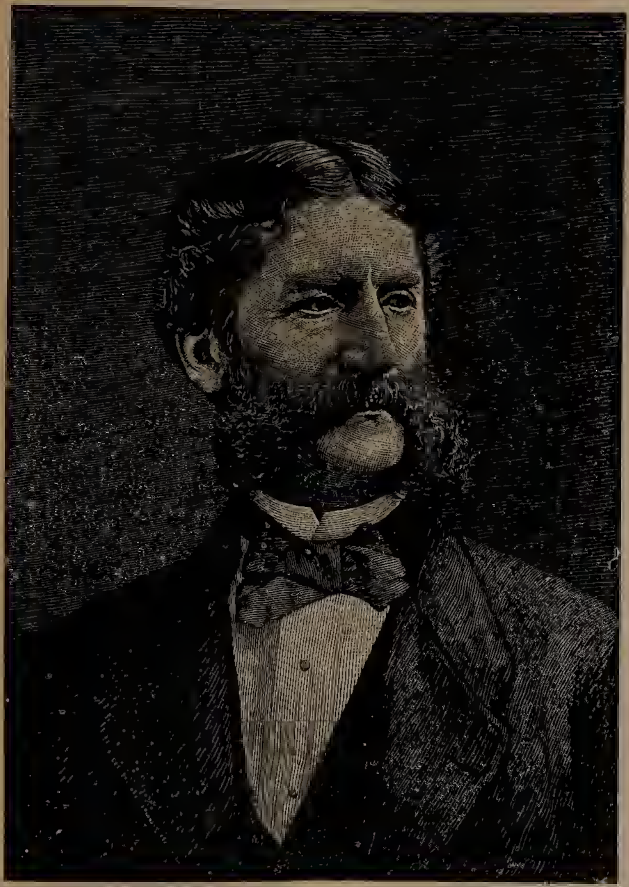
A prohibitory amendment passed in the Senate, and failed in the House by two votes.

Coal.—The following coal statistics are for the year 1883:

	Tons.
Production of eighty-nine mines	2,549,020
Estimate of twenty-nine mines from which no reports were received	256,546
Total for one hundred and eighteen mines	2,805,566
Shipped out of the State by railroad, east	1,248,986
Shipped out of the State by railroad, west	106,574
Total by railroad	1,355.560
Shipped out of the State by river	625,717
Total quantity of coal shipped out of the State.	1,981,277

Assessment of Property.—The following are items of the assessment for 1884: Number of horses, mules, and asses, 127,282; of cattle, 406,055; sheep, 680,718; hogs, 212,114; carriages, vehicles, etc., not elsewhere included, 43,315; watches and clocks, 60,055; piano-fortes and melodeons, 7,096; value of horses, etc., $6,384,456; cattle, $6.531,349; sheep, $1,255,329; carriages, etc., $1,223.767; watches and clocks, $459,842; piano-fortes and melodeons, $524,444; value of farming and garden utensils and implements, $2,650,142; household and kitchen furniture, $4,546,599; value of property and capital (not real estate) employed in any trade or business, after deducting debts, $3,355,934; all money and value of all credits and investments not otherwise assessed nor exempt, after deducting debts, $9,916,098; value of toll-bridges and ferries, $292,388; value of all personal property not exempt nor otherwise assessed, including stock in any bank doing business in the State, $1,614,673; average value of personal property listed by merchants, etc., $3,930,083; actual value of capital employed or invested in trade or business by incorporated companies, except railroad, telegraph, foreign insurance and express companies, $678,900; value of capital used by any individual or firm not incorporated in any trade or business, $1,460,516; total amount of all personal property, $46,167,253; acres of land, 18,162,070; value of buildings on land, $12,122,615.98; value of buildings on lots, $16,193,675.50; value of town-lots alone, $9,108,570.63; value of land alone, $81.638,570.81; total value of land, lots, and buildings, $118,951,675.03; total value of personal and real estate, $165,124,394.03; total tax, including license and capitation tax, $679,020.13.

WHITE, RICHARD GRANT, an American author, born in New York city, May 23, 1822; died there, April 8, 1885. He was the son of a wealthy South Street merchant, and was graduated at the University of New York. He studied medicine, and later was admitted to the bar, but entered upon a literary career. He became a musical and art critic, and was soon a recognized authority on those subjects. He next became known as a contributor to the magazines, his Shakespeare articles attracting much attention. These were followed in 1853 by his first volume, "Shakespeare's Scholar," which led in turn to a critical edition of Shakespeare's works. Another special department in which he worked was philology. Of several volumes that he published on this subject, the best known is "Words and their Uses." When the civil war began, he did good service to the Union cause by contributing a series of able articles to the London "Spectator," in which he furnished the information and argument best calculated to disillusionize the British people of their sentimental sympathy for the South. But his chief work at this period was "The New Gospel of Peace," which was issued anonymously, and was by far the most generally popular of all his works. It was a broad and exceedingly pungent satire upon the Copperhead and peace-at-any-price factions, in the form of biblical annals. In 1861 he published "National Hymns, How they are Written and How they are not Written," an essay embodying many of the hymns that had been written in competition for a prize of $600, which was not awarded. In 1863 he published a volume entitled "The Genius of Shakespeare." His "England Without and Within" provoked much discussion and some sharp criticism, but his main points were generally untouched. This was followed in 1884 by "The Fate of Mansfield Humphreys." The last literary labor to engage his attention was the gathering of a number of Shakespearean studies, which had appeared in various periodicals. He had so far completed the task that after his death other hands made the few necessary corrections, and the book was published with the title of "Studies in Shakespeare." Of special interest and value to Shakespeare scholars is the portion of the work devoted to glossaries and lexicons. Mr. White contributed many elaborate and carefully written articles to the American and other Cyclopædias. For nearly a quarter of a century he held the office of chief clerk of the Revenue Bureau of the New York Custom-House, which he resigned in 1878. His life was retired, and his intimates were not numerous. At concerts and at the opera his tall, erect, and striking figure (he was six feet three inches) was very familiar. He was a man of many accomplishments and achievements, but almost exclusively devoted to literary and artistic pursuits.


RICHARD GRANT WHITE.

WISCONSIN. State Government.—The following were the State officers during the year: Governor, Jeremiah M. Rusk, Republican; Lieutenant-Governor, Samuel S. Fifield; Secretary of State, Ernst G. Timme; State Treasurer, Edward C. McFetridge; Attorney-General, Leander F. Frisbie; State Superintendent of Public Schools, Robert Graham; Railroad Commissioner, Nils P. Haugen; Commissioner of Insurance, Philip L. Spooner, Jr.; Commissioner of Labor Statistics, Frank A. Flower. Supreme Court: Chief Justice, Orsamus Cole; Associates, William P. Lyon, David Taylor, Harlow S. Orton, and John B. Cassoday.

Legislative Session.—The Legislature met on Jan. 14 and adjourned on April 13, the longest session since 1867. The bills that became laws number 471. The following is a summary of the most important acts passed:

The following new offices were created: State Veterinary Surgeon, State Pension Agent, State Factory Inspector, a board of five to examine and license applicants and regulate dentistry, and five commissioners to examine and license applicants for admission to the bar.

Creating a system of agricultural institutes, to be held in each county, during the winter, under the guidance of the professors of rural topics from the State University, assisted by leading specialists.

Appropriating $30,000 to build and equip a State School for Neglected and Dependent Children, the institution to be constructed on the cottage plan.

A high-license measure providing for cities and villages of over 500 inhabitants a minimum of $200, which may be worked up to $500 by popular vote; in smaller places the minimum of $100 and maximum of $400 have been established.

Prohibiting the sale of intoxicants or the practice of gambling games on agricultural fair grounds.

Prohibiting farming out the care of insane persons and paupers to the lowest bidders.

The State University was voted $190,000 for the purpose of replacing Science Hall, burned in December, 1884, with three substantial buildings, and furnishing and stocking them.

A State tax for the maintenance of the common schools, at the rate of one mill on the dollar of assessed valuation.

The State Board of Health was given greater power.

The Insurance Commissioner was authorized to sue for and collect penalties and compromise judgments.

For compiling, perfecting, recopying, and publishing the war records in the Adjutant-General's office.

Creating the new counties of Oneida and Forest, in northern Wisconsin.

To secure the payment by receivers of past wages due to employés.

The salary of Circuit Court judges was fixed at $3,600.

Fire-escapes were ordered to be applied to all three-story hotels and factories; and all churches, schoolhouses, and places of entertainment are obliged to have their doors swing outward.

To protect the fishing industries by regulating the size of net-meshes and shortening the seasons for catching.

A stringent registry law was enacted for cities of over 25,000 inhabitants.

Women were granted the right of suffrage on school matters.

The manufacture or sale of oleomargarine or other imitations of dairy products was prohibited.

The official time of the State was declared to be Central Railway time.

Making telegraph companies liable for damages occasioned by the non-delivery of messages within twenty-four hours of receipt.

A special list of Union veterans in the next State census, to be taken this year, was provided for.

The new cities of Mayville, Cedarburg, Cumberland, Viroqua, Augusta, Alma, River Falls, New Richmond, West Bend, Whitewater, and Kaukauna were incorporated.

John C. Spooner, Republican, was chosen United States Senator.

Financial.—The balance to the credit of the general fund, Sept. 30, 1884, was $938,567.15; receipts during the following year, $1,193,272.58; total, $2,131,839.73; disbursements, $1,653,951.80; balance, Sept. 30, 1885, $477,887.93. Of the receipts, $733,195.57 was derived from railroad companies. The balance to the credit of the trust funds, Sept. 30, 1884, was $142,397.84; receipts, $842,481.75; total, $984,879.59; disbursements, $753,896.30; balance, Sept. 30, 1885, $230,983.29. The following statement shows the investments of the trust funds:

School	$2,838,739 15
University	225,672 95
Agricultural College	285.447 48
Normal School	1,296,981 39
Total	$4,646,840 97

Population.—The census taken in 1885 exhibits a gain of about 21 per cent. over 1880. The following table gives the results of this census by counties:

COUNTIES.	Population, 1885.	Subject to military duty.	Union veterans.	Gain since 1880.
Adams	6,921	1,165	266	180
Ashland	6,941	2,259	73	5,382
Barron	13,596	2,802	357	6,513
Bayfield	3,431	1,329	60	2,867
Brown	36,921	5,936	542	2,831
Buffalo	16.483	2,897	298	955
Burnett	4,607	646	26	1,467
Calumet	17,667	3,002	338	1,036
Chippewa	25.145	5,065	484	9.643
Clark	15.423	3,334	483	4,708
Columbia	29,855	5,575	598	1,790
Crawford	16,181	2,659	517	537
Dane	58.400	11,188	900	5,166
Dodge	46,333	7,667	559	405
Door	15,552	2,702	215	3,907
Douglas	2,704	884	23	2,049
Dunn	21,951	4,554	532	5,133
Eau Claire	34,789	8,733	593	14,797
Florence †	1,720	263	27	1,720
Fond du Lac	46,822	7,851	667	*33
Forest †	425	117	9	425
Grant	37,277	6,065	996	*575
Green	23,071	4.137	613	1,342
Green Lake	16,008	2,558	279	1,527
Iowa	22,872	3,979	355	*756
Jackson	15,902	2,768	343	2,617
Jefferson	34,256	5,640	554	2,101
Juneau	17,024	2,996	487	1,444
Kenosha	14,137	2,529	197	587
Kewaunee	17,278	2,644	176	1,472
La Crosse	34,791	6,796	434	7,719
Lafayette	20.467	3,803	342	*811
Langlade	5,912	1,400	168	5,227
Lincoln	6,989	1,732	150	4.078
Manitowoc	38,692	5,889	524	1,176
Marathon	27,053	5,254	367	9,932
Marquette	9,487	1,565	242	580
Marinette	13,494	3,564	143	4,565
Milwaukee	187,660	35,887	3.100	49,137
Monroe	23.549	3,909	642	1.943
Oconto	13,205	2,586	259	3,357
Oneida ‡	....	....	....	....
Outagamie	35,559	6.204	671	6,843
Ozaukee	15,797	2.436	145	335
Pepin	6,972	1,184	186	746
Pierce	19.645	3,620	482	1.901
Polk	12.881	2,550	274	2.863
Portage	23,248	4,018	482	7.517
Price	3,071	944	64	2,286
Racine	35,398	6,639	493	4,477
Richland	19,303	3,342	800	1,129
Rock	42,620	8,589	933	3,797
Sauk	30,359	5 255	818	1.630
Sawyer †	2,431	658	32	2.431
St. Croix	22.379	4,625	504	3.423
Shawano	16,629	2.604	231	6,258
Sheboygan	38,600	6,305	638	4,394
Taylor	5.703	1,236	100	3,392
Trempealeau	19,112	3.193	273	1,923
Vernon	24.423	4,026	701	1,188
Walworth	27,802	4,996	668.	1.553
Washburn †	1,671	513	39	1,671
Washington	23,692	3,926	272	270
Waukesha	31.123	5,585	494	2,166
Waupaca	25,340	4,217	717	4,386
Waushara	13,921	2.217	565	1.238
Winnebago	50,395	8,837	882	7.654
Wood	14,358	2,821	287	5.377
Total	1,563,423	§286,289	§29,686	247.943

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* Loss. † Not organized in 1880.

‡ Not separately computed, being included in Lincoln.

§ Totals correct; county figures subject to slight corrections.

There are 806,342 white males and 748,810 white females. Of the population, 1,069,433 are natives of the United States, 265,756 of Germany, 90,057 of the Scandinavian countries, 36,371 of Ireland, 32,731 of Great Britain, 21,887 of British America, 15,838 of Bohemia, 7,357 of Holland, and 7,070 of Poland. The total population in 1880 was 1,315,480. The following table exhibits the population of the principal cities according to the enumerations of 1880 and 1885:

CITIES.	1885.	1880.
Milwaukee	158,509	115,578
Oshkosh	22,064	15,749
Eau Claire	21.668	10,118
La Crosse	21,740	14,505
Racine	19,636	16,031
Fond du Lac	12,726	13,091
Madison	12,064	10,325
Sheboygan	11.727	7,314
Appleton	10,927	8,005
Janesville	9,941	9,018
Wausau	8.810	4,277
Chippewa Falls	8,719	3,982
Watertown	8,487	7,883
Green Bay	7,111	7,476
Manitowoc	6.881	6.367
Marinette	4,100	2,750
Stevens Point	6,510	4,449
Portage	5.501	4,346
Menomonie	5,403	2.592
Beloit	5,359	4,790
Kenosha	5,097	5.039
Peshtigo (town)	5,150	3,952

Agricultural Statistics.—The following statistics are for the census year ending June 30: Acres of farm-land in State, 16,359,247; value of land, $393,556,146.50; number of farm-laborers employed, 60,285; wages paid them, $8,549,540; horses and mules on hand, June 30, 398,132; their value, $31,049,563; value of cheese made, $2,984,813.92; value of butter made, $5,850,402.55; value of wheat raised, $13,928,046; value of corn, $12,576,561; value of oats, $11,008,507; value of hogs on hand, June 30, $4,472,658.

Manufacturing Statistics.—The following is a statement of the principal manufacturing statistics of the State for the census year ending June 30: Value of establishments and their products, $193,700,167; number of men employed, 71,185; amount of wages paid during year, $25,898,449.75; value of lumber, lath, and shingles manufactured, $27,113,139.92; value of wagons, carriages, and sleighs manufactured, $4,677,870; value of iron products, $10,300,506; value of leather and articles of leather, $8,629,519; value of paper, $2,804,294; value of beer manufactured, $9.081,108; value of articles of wood, $13,719,176.94; value of cigars and cigarettes, $2,331,661; value of flour manufactured, $19,870,102.39.

Judicial Election.—An election took place on the 7th of April for an Associate Justice of the Supreme Court, when Judge David Taylor was re-elected.

WYOMING. Territorial Government.—The following were the Territorial officers during the year: Governor, William Hale, succeeded in January by Francis E. Warren; Secretary, Elliott S. N. Morgan; Treasurer, William P. Gannett; Auditor, Perry L. Smith; Superintendent of Public Instruction, John Slaughter. Supreme Court: Chief-Justice, John W. Lacey; Associate Justices, Jacob B. Blair and Samuel C. Parks. Governor Hale died in January, 1885.

Finances.—The balance in the treasury on Jan. 1, 1884, was $49,782.68; receipts in 1884, $23,006.73; receipts in 1885, $34,394.09; total, $107,183.50.

The expenditures in 1884 were $37,992.06; expenditures in 1885, $38,015,99; total, $76,008.05.

The balance of $31,175.45 remaining on hand Jan. 1, 1886, consists of $17,254.22 of the general fund, and $13,921.23 belonging to the stock indemnity fund. The policy of Wyoming has been to have no outstanding obligations. The wealth of the Territory has about trebled the past six years. In 1879 the assessed valuation was $10,603,203.95; in 1885 it had increased to $30,717,249.81. There has been a marked decrease in the rate of Territorial taxation during recent years. In 1881, the rate was four mills on the dollar; in 1882, two mills; in 1883, one mill; in 1884, three quarters of a mill; and in 1885, one mill.

Convicts.—The number of Territorial prisoners remaining in confinement Jan. 1, 1886, was 79. Forty-seven prisoners have been received from Wyoming during the past year. The cost of keeping and transporting convicts for 1884–'85 was $10.204.09. All prisoners from this Territory are now sent to the Penitentiary at Joliet, Ill.

Education.—The number of pupils enrolled in 1885 was 4,405, an increase of 1,053 over 1884. The amount paid teachers in 1885 was $55,935.67, an average of $58.06 a month each. The average cost of the education of each pupil was $4.14 a month. The amount paid for the erection of school-houses was $13,075.

Insane.—About twenty patients are maintained by the several counties of the Territory, most of whom are in a private asylum at Jacksonville, Ill.

The Chinese.—Relative to outrages committed upon the Chinese, the Governor, in his message, says:

> Wyoming, within the past five months, has achieved an unenviable notoriety on account of an unlawful assault made upon the Chinese miners at Rock Springs. The inhuman and heartless attack on the part of the white miners showed such an utter disregard of all moral and civil laws that it deservedly received the severest condemnation throughout the country. There was a general feeling that the Chinese had been grossly outraged, as they were entitled, under existing treaties between China and the United States, to the same protection to life and property as any other class of foreigners. Under any state of affairs the white miners were not justified in murdering their helpless victims. The recent troubles at the mines in Rock Springs convince me that there should be some further provision in our statutes relating to the enforcement of the law. It is the duty of the Governor to see that the laws are faithfully executed, and he is authorized to use all the power at his command to insure obedience to the law. But it has been demonstrated that when any serious difficulty occurs the county and precinct officers need assistance to maintain order. The power of the Executive would be greatly strengthened if provision were made for an organized Territorial force.

Y

YACHTING. (German, *Jacht*; Dutch, *jagt*; originally a swift boat, from *jagten*, to speed, to chase.) The modern definition of a yacht is a pleasure-boat, propelled by sails or steam. That pleasure-boats were known to the ancients is evident from various references, of which the earliest is probably that of the prophet Ezekiel (xxvii, 6, 7), where he refers to the pleasure-galleys of Tyre as fitted with "benches of ivory" and sails of "fine linen and broidered-work from Egypt." Sails, however, were in those days used only on a "free wind," or as auxiliary to oars, just as sails are at present used as auxiliary to the screw-propeller. William of Orange (about 1570) has the credit of being the first sailor yachtsman, and Charles II of England maintained a small sailing-boat of Dutch build on the Thames a century later. During the next hundred years sailing-yachts multiplied to such an extent that, in 1815, the Royal Yacht Squadron at Cowes was organized, and since that time almost every year has witnessed the formation of similar associations. Lloyd's "Yacht Register" (British) for 1885 contains the names of 3,125 yachts, and the "American Register" for the same year has 1,797 yachts. This is an increase in Great Britain of 39 and in America of 266 over the preceding year. These lists, however, are confessedly incomplete, as a great many yachts are not registered, and do not belong to clubs. As sea-going vessels, yachts are entitled to special privileges, being permitted to enter and leave the ports of all maritime nations without the usual formalities required from merchant-craft.

According to the latest attainable statistics, there are now over 100 clubs in the United States flying recognized private signals, besides the national yacht ensign as prescribed by law. The Hoboken Model Yacht Club was the first in America. It was organized in 1840, Mr. John C. Stevens being prominent among its founders. Its boats were mostly small, and of what is now derisively called the "skimming-dish" pattern, suggested by the prevailing model among river-craft, and well adapted to the smooth and shallow waters in which they were used. Within the next few years, larger vessels were built, the most famous of which was the sloop "Maria," designed and owned by Mr. Stevens. She measured 110 feet on deck, had 26 feet 8 inches beam, and drew 5 feet 3 inches of water. She was very heavily sparred, carried an enormous spread of canvas, and was unquestionably a very fast boat, in the comparatively smooth waters that were her natural home. It is worth noting that outside ballast, so successfully used of late years on the English type of cutter, was tried on the "Maria's" center-board. This vessel, despite her great speed under favorable conditions, seems to have exceeded the limit of size regarded as desirable by American yachtsmen. At all events, no more sloops of her dimensions were built, and for large yachts the schooner rig became the most popular.

During this decade George Steers was winning great reputation as a builder of fast sailing-vessels. American clipper-ships were making wonderful records for speed all over the world, and in 1851 Steers turned out the famous schooner-yacht "America," which was sent across the Atlantic, and, asking no favors in the way of rules or allowances, beat the whole Royal Yacht Squadron so effectually that not one of them was in sight when she crossed the winning-line, after a race around the Isle of Wight.

The "America" is a deep schooner, 94 feet over all, 22 feet 6 inches beam, and 12 feet draught. She revolutionized English yacht-building and sail-making. Many of the crack English craft of the day were cut down, and had new bows added approximating the Steers model, while all the new boats that were built were modified to meet the new conditions. Sails that prior to this time had been purposely made to "bag," under the mistaken idea that they would hold the wind better, were now made to set as flat as possible, and the comparatively bluff bow gave place to a long, narrow "entrance," with the greatest beam well aft. The "America" was sold in England, but no English crew was ever able to make her equal her record under American management. She became a blockade-runner during the civil war, was sunk by a United States cruiser in Savannah river, and was subsequently raised and used as a practice-boat in connection with the United States Naval Academy. She was purchased by Gen. B. F. Butler in 1867, and is still owned by him. It is generally conceded that she is no match for the fastest of our modern schooners, but she is still a fine boat of her class.

The "America's" victory gave an impetus to schooner building, which lasted until within a few years. Every one that wanted a large sailing-yacht must needs have a schooner; but of late "single-stickers," as they are collectively called, have been growing in favor as being relatively faster, large enough for most purposes, and on the whole more easily handled than schooners.

In this country the tendency has always been to favor the use of the center-board, rather than the excessively deep keel, for sailing-yachts. In England the tendency has been the other way. As a result, many American yachts have been made shallow and wide, depending for their stability on great breadth of beam, while English yachts have with each succeeding year been made narrower and deeper, with very heavy lead or iron keels (outside ballast, as it is called). Advocates of the center-board and light draught have derisively termed the English model "a plank on edge," while the English have retorted by calling the American boats unseaworthy "skimming-dishes." Between these two extreme types, 1 and 4 in diagram of midship sections, Fig. 1, are compromise boats, comparatively deep-draught center-boards (3), and comparatively shallow-draught keels (4).

The controversy between the advocates of the two different types has waxed very bitter of late years, and, as usual in such cases, neither side is disposed to make any concessions. Without taking sides in the controversy, we may state some of the advantages and disadvantages of the two extreme types. Among the advantages of wide, shallow boats, is their comparatively small first cost. Their initial stability under sail is far greater; hence life on board is more comfortable to such as prefer a reasonably level deck to one inclined at a steep angle. The light draught of such a boat enables her to make harbor easily, or run in close to the beach when no harbor is convenient. When "close-hauled," her center-board enables her to go very close to the wind, and when running free it can be entirely "housed," thereby insuring considerably greater speed. When properly rigged and well handled, such boats have no superiors for speed in smooth water. Their main disadvantage is their unseaworthiness. If struck by a heavy squall, or carelessly handled, they are likely to capsize, and when once over can not be righted, and must inevitably sink if they carry a reasonable amount of ballast. In order to provide head-room in the cabin, it is necessary, in boats less than fifty feet long, to have a deck-house, which interferes seriously with ship-shape appearance, and with convenience in moving about on deck, where most of the yachtsman's waking hours are spent; moreover, the large area exposed to the sun renders the cabin very warm. The center-board trunk is sadly in the way in the cabin. Such boats, unless very strongly built, which of course adds to their first cost, are not long-lived, and are sure to entail a heavy annual outlay for repairs.

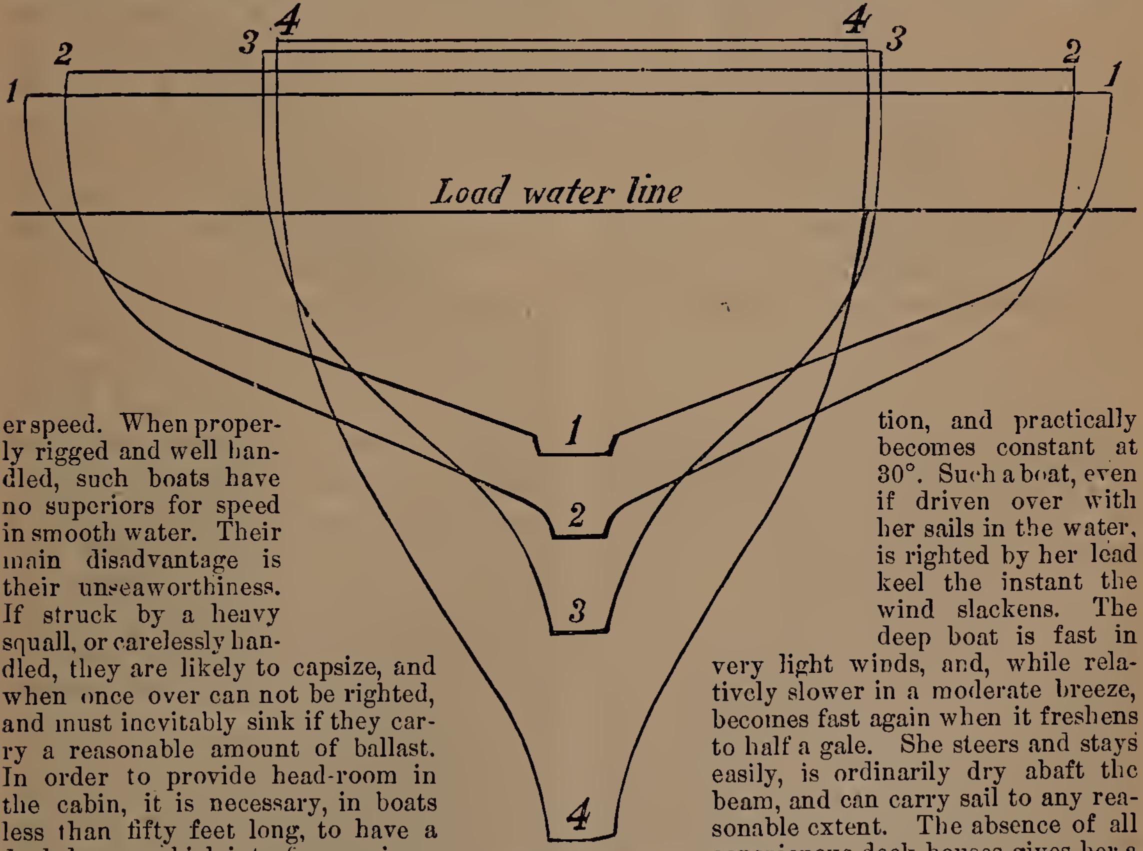


Fig. 1.

The disadvantages of the deep, narrow boat are in general the opposites of those specified in the case of her light-draught cousin. Her angle of inclination in a moderate wind renders her uncomfortable to live and move in. Her great draught limits her to comparatively deep harbors, and if it is desired to land without making port she must often come to anchor far off shore. In heavy weather she dives into the sea like a log, while the downward momentum of her heavy lead keel tends to overcome the scant buoyancy of her fore-section, so that the forward decks are constantly awash. The cabin is necessarily narrow, as is also the skylight, in all save the largest boats. Lastly, their first cost is great, owing to the heavy framing and rigging necessary to meet the severe strain to which everything is constantly subjected. Their advantages are unquestionable seaworthiness and consequent safety. The absence of a deck-house renders it possible to shut everything up tight in case of need, so that water can not possibly find its way below. Stability increases with the angle of inclination, and practically becomes constant at 30°. Such a boat, even if driven over with her sails in the water, is righted by her lead keel the instant the wind slackens. The deep boat is fast in very light winds, and, while relatively slower in a moderate breeze, becomes fast again when it freshens to half a gale. She steers and stays easily, is ordinarily dry abaft the beam, and can carry sail to any reasonable extent. The absence of all conspicuous deck-houses gives her a ship-shape look inboard, and leaves ample room for working ship and getting about generally. The overhang stern extends this deck-room, and, it is claimed, helps her when running before the sea. Below decks the cabin is high, head-room being obtainable in quite a small boat, and, since the submerged section is great as compared with that exposed to the sun, a comfortable temperature is generally assured. The arrangement of sky-lights, too, renders ventilation easy.

Such being the merits and demerits of the extreme types, it seems evident that each has its virtues and each its faults. One seeks to overcome resistance by skimming over the water, and the other by cutting through it. One seeks stability by spreading out upon the surface, the other by reaching down below it. Neither plan is altogether commendable, and anything that reduces the yacht to a mere sailing or racing machine, whether it be as a "plank on edge" or as a "skimming-dish," is to be discouraged. In the illustration the two crack yachts of the season are drawn with their submerged sections and relative degrees of stability in a whole-sail breeze, as shown by the angle of inclination. It must not be assumed from the foregoing that deep boats have not from the earliest times been well known on the American coast. The "pinkstarn" of the downeast fisherman, the "buckeye" of Chesapeake Bay, and the New York pilot-boats, as well as many of our yachts, are, and always have been, deep, seaworthy craft. Many moderately deep and able boats are fitted with center-boards, and are fearlessly used by fishermen throughout the winter along the North Atlantic coast, while the regular oyster-trade between New York and Norfolk, Va., is carried on throughout the season by center-board smacks drawing only about three feet of water. Not a winter passes that these little shallow-draught coasters are not caught out in severe gales, which frequently drive them far out to sea. Attention is called to these facts because they are studiously ignored by the more strenuous advocates of keel-boats, and certainly prove conclusively that such craft are not intrinsically unseaworthy. The terms "sloop" and "cutter," as at present used, are misleading, since many persons do not understand the essential difference of rig; and, moreover, many boats that are called sloops are, so far as sails and spars are concerned, hardly to be distinguished from regular cutters. Primarily the difference was briefly as follows: Both were "single-stickers," but the sloop had her mast stepped well forward. Her lower mast was long, and her topmast short. Her topsail was small, and her jibs ran on fixed stays. leading from the mast to the bowsprit and jib-boom. The cutter stepped her short mainmast almost amidships, and carried a very long topmast and a large "overhanging" top-sail. Forward, instead of jib and flying-jib, she set a large stay-sail, the after-leech of which considerably overlapped the luff of the main. Her jibs were "set flying," as it is termed—that is, the sail, when wanted for service, is hooked to the halyard, outhaul, and sheets, and when taken in is stowed below decks instead of being "bobbed" at the foot of the stay. This renders it a very easy matter, instead of reefing, to set larger or smaller sails. On cutters the foot of the main-sail is not laced to the boom. All these features, however, have been more or less adopted by vessels that are still known as sloops merely because they are fitted with center-boards.

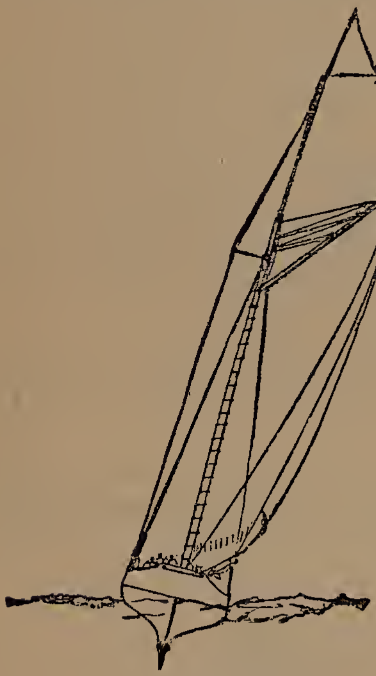


FIG. 2.—PURITAN.

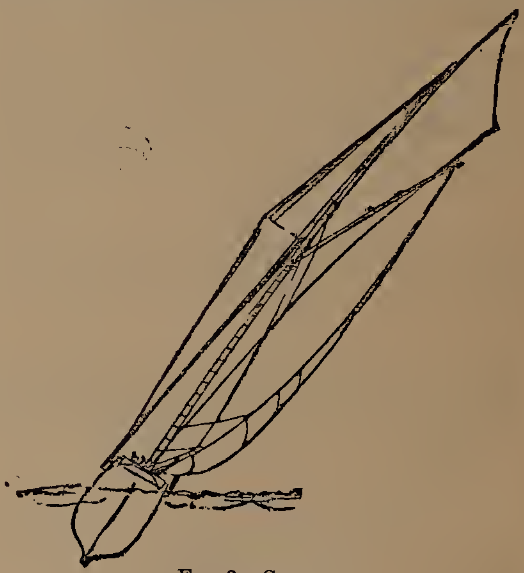


FIG. 3.—GENESTA.

The development of the cutter has been altogether English, and she has been brought to her present perfection as a sailing-craft only after years of study and costly experiment. The first extreme cutter that made her appearance in American waters was the Scotch "Madge," a ten-tonner, which came over on the deck of a steamer, with a brilliant record, to which she added in a series of races here, establishing her fame as a very fast boat. The "Madge" measures 46 feet 1 inch on deck and 38 feet 9 inches on the water-line; her beam is 7 feet 9 inches, and she draws 8 feet of water, with 8 tons of lead in her keel. Since her advent, several fine cutters have been built in this country, and the American type, both in rig and model, has undergone sundry modifications.

The yachting event of the season was the contest for the "America cup," namely, the trophy won by the famous schooner-yacht already described, now held, subject to challenge from any foreign owner, by the New York Yacht Club. Early in the year, Sir Richard Sutton, of the Royal Yacht Squadron, of England, sent a challenge, naming his cutter-yacht "Genesta" as the competing craft. This vessel was one of the fastest of the English squadron. Her dimensions are given elsewhere. As has already been said, there were no sloops in American waters large enough to compete with such a craft on reasonably equal terms. Competitive designs were invited, and two large sloops—the "Puritan" and the "Priscilla"—were ready to launch shortly after the season opened. Both vessels participated in the cruise of the New York Yacht Club, and their performances throughout, and subsequently during the trial races, were watched with the keenest interest. The "Genesta," too, took part in the cruise, but always kept a boat towing astern, and pointedly declined being drawn into anything that looked like a race. The two American sloops were so nearly equal in speed that there was small choice between them; but the "Puritan" was, after a series of fair trials, adjudged the better boat.

The official measurements of the English and American yachts were as follow:

DIMENSIONS	Genesta.	Puritan.
Length over all	96 ft. 5 in.	93 ft. 0 in.
Length on water-line	81 " 7½ "	81 " 1½ "
Greatest beam	15 " 0 "	22 " 7 "
Greatest draught	13 " 6 "	8 " 5 "
Displacement	150 tons.	105 tons.
Ballast, keel	70 "	27 "
Ballast, inside	2 "	20 "
Tonnage	80 "	140 "
Sail area	7,387 ft.	7,982 ft.

The first race was appointed for Sept. 8, the course to be 20 miles to windward, or to leeward, according to weather, from one or other of the light-ships outside of New York Bay. There followed, however, a long series of delays. On Sept. 8 there was not enough wind to go over the course. Sept. 9 there was a fine breeze, but the "Puritan" fouled the "Genesta," breaking off her bowsprit. The "Puritan" was adjudged to have forfeited the race, but the owner of the "Genesta" courteously declined to take advantage of the accident. On Sept. 11, damages having been repaired, a start was made, but the wind failed. In both the attempted races (on the 8th and 11th) the wind had sufficed to carry the yachts nearly half-way over the course, and the American apparently had the lead on both days. Sept. 14 brought a fresh breeze. The prescribed course was the regular racing-course of the New York Yacht Club—starting from a point just inside of New York harbor, to and around Sandy Hook light-ship, about forty-five miles in all. The breeze held till near the finish, and the race was quite close until the wind fell away nearly to a calm, and the "Puritan" was able, by raising her center-board, to gain some advantage over her deep-draught antagonist. The "Puritan" won by 16 minutes and 19 seconds, corrected time. The next, and, as it proved, the final race, was sailed on Sept. 16, over a course 20 miles to leeward, from Scotland light-ship and return. The wind was fresh throughout the race, rising at times to what is termed a stiff lower-sail breeze. The "Genesta" beat the "Puritan" by 2 minutes and 6 seconds in the run before the wind; but the American made up for it in the windward work on the home-stretch, crossing the line 1 minute and 38 seconds (corrected time) in advance of the Englishman.

The result of these races has been sensibly to check the tendency toward the extreme cutter type on the part of American builders. At the same time the admirable qualities of moderately deep boats are recognized, and objectionably shallow craft are likewise in disfavor. The center-board, however, is deservedly more popular than ever with American yachtsmen.

A praiseworthy tendency of recent English and American yachting is the rapidly increasing demand for small, seaworthy craft, commonly known as single-handed cruisers, vessels that can be effectively sailed by one man, but provide good sleeping and cooking accommodations for two or three persons, and are able boats in any weather likely to be encountered. Such vessels are sure to educate their owners into good seamen, and cultivate a self-reliance and readiness of resource in a degree not readily attainable in larger craft. As a type of these we present sail plan (Fig. 4) and longitudinal section (Fig. 5) of the "Windward," a yawl built by W. P. Stephens. She was launched in June, 1884, and has stood the test of actual cruising under all conditions. She is 22 feet over all, 18 feet at the water-line, 6 feet beam, 4 feet draught, and has 5 feet head-room in her cabin. This height is obtained by a "sky-light cabin-trunk," having a companion-slide at the after end. Under the cockpit-floor is a locker, and below this a 30-gallon water-tank, which is filled through a pipe running up to the cockpit-floor. There are two clothes-lockers on either side the companion-way, and two seat-lockers in the cabin, each 7 feet long and 1 foot 8 inches wide. These are fitted with extension boards that widen them 4 inches when required for berths. Forward, near the mast, is a stove; and at the foot of the mast an ice-box, while still farther forward, "in the eyes of her," are shelves for stowage of tools, paint, tar, and the hundred knickknacks that go to equip a floating home, be it ever so humble.

Eighteen to 30 feet approximates the extreme limit of size for a single-hander. Smaller than that she can hardly be, and do what is required of her; larger, and she passes the limit of safety for management by one man. A 30-foot boat of this class is often fitted with an after stateroom containing two berths, besides a main cabin with berths for two more, and 6 or 6½ feet of head-room. In a boat of this size one man may well be carried before the mast, and for him quarters are provided in the forecastle, where there is room for an oil-stove, and ample lockers. Much ingenuity has been displayed in the arrangement of stowage-room, as shown in the plan of the "Windward," but the details vary according to the taste of designers and owners. Such craft as these may be appropriately rigged as cutters, sloops, yawls, luggers, or cat-boats; but the yawl-rig has much to commend it. This is an old rig, well proved in European waters, but hitherto not generally adopted here, except on the Pacific coast, where the prevailing winds are so powerful that its easy provision for shortening sail commends it. It is now, however, winning its way with the increase of single-handers on the Atlantic coast.

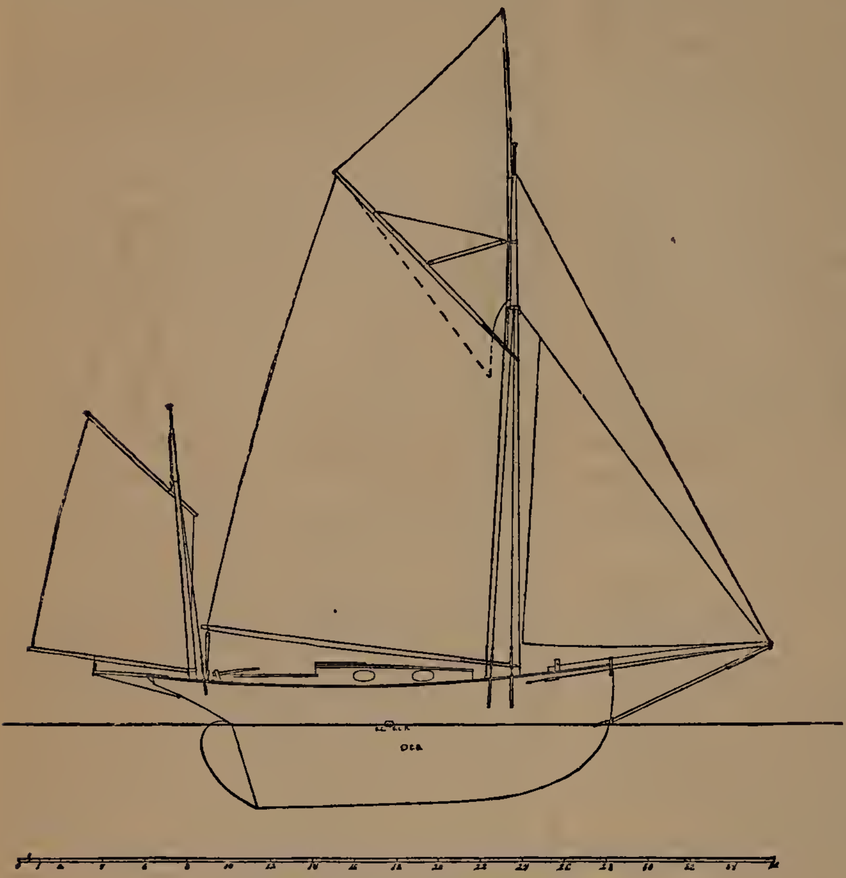


Fig. 4.—Yawl "Windward."

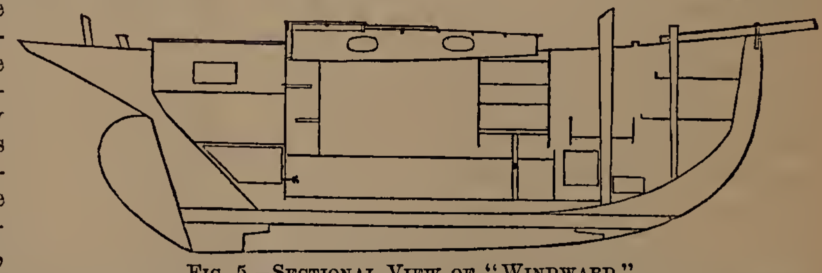
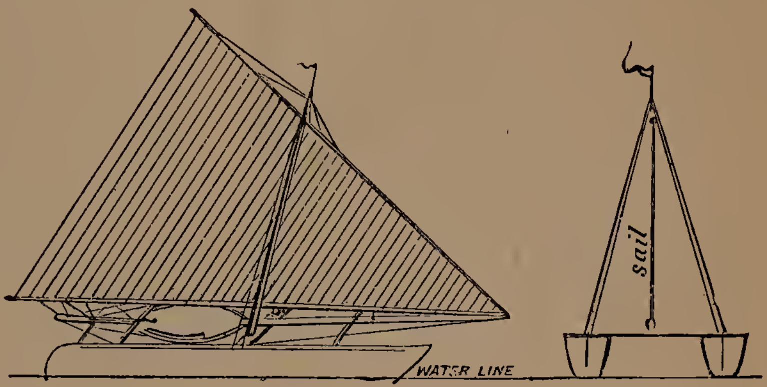


Fig. 5.—Sectional View of "Windward."

Its advantages are obvious at a glance. The mainmast usually carries a boom and gaff, main and top-sail; and abaft the rudder, just so that it is cleared by the main boom, is stepped a small mizzen, the sheet of which is rove through a block in the end of a fixed outrigger projecting over the stern. Sail can be shortened with the greatest ease, and without tying a single reef-point, by simply lowering the mainsail, and working under jib and mizzen. Or, jib and mizzen can be furled, and the ship will work equally well under mainsail alone. Reef-points are provided, however, so that sail can be further reduced in that way if desired.

Sharpies have, within a few years, claimed a place in yacht-squadrons, and are deservedly popular in the shallow waters of the South, especially along the Florida coast, to which so many Northerners now resort during the winter months. These boats first came into use among the oystermen of Long Island Sound. "Fair Haven sharpies" was one of their earliest designations. The first sharpies were built of two longitudinal planks, forming the sides, a stout transom or stern-piece, and transverse plank nailed across for the bottom. Of course this gave them a very light draught, and fitted them admirably for use on the extensive mud-flats along the sound. They were usually rigged with center-boards and leg-o'-mutton sails, and were very fast on all points of a wind. Gradually they were enlarged and improved, until now they are built with ample cabins, spacious deck-room, and all the interior appointments of first-class yachts. For hunting and fishing expeditions in shoal Southern waters they are unrivaled; and, while they can not be trusted for windward work or lying-to in heavy weather, owing to their flat bottoms, they are easy and safe before the wind in almost any sea. Adherents of the deep-draught theory, who may question this last statement, are referred to the regular fruit-packets that run up and down the Florida coast from Jacksonville to Lake Worth, and frequently ride out severe gales on the Atlantic; also to the published logs of sharpie navigation from New York to Florida.

Catamarans form a distinct class. They are safe and marvelously fast in smooth water, but very unsafe in a sea-way. The catamaran is an attempted adaptation of the "flying-proa" as used by the Pacific-islanders. (See "Annual Cyclopædia" for 1884, p. 115.) Fig. 6 is a catamaran with lateen sail and shear masts.



Side. Fig. 6. End.

Improvements in the building of large steamers within a few years have given an impetus to this branch of yachting, and led to the organization, in 1883, of the America Yacht Club, having its headquarters in New York.

Of the large steamers, the "Nourmahal," owned by Mr. William Astor, of New York, merits a somewhat detailed description as the largest and one of the latest additions to the fleet. She was designed by Gustave Hillmann, of City Island, N. Y., and built by the Harlan and Hollingsworth Company of Wilmington, Del., being the first American steel yacht. She was finished early in the spring of 1884. Her interior fittings are rich and perfect in every detail, comprising main saloon, ladies' saloon, state-rooms, and quarters for officers and crew. Her dimensions are:

	Ft.	In.
Length over all	250	0
Length between perpendiculars	232	5
Length on water-line	221	0
Extreme width	30	0
Depth, floors to deck	18	7¼
Draught, aft	15	0
Draught, forward	13	0

The engines are vertical, direct-acting, surface-condensing, and can work up to 1,400 horse-power, giving the vessel an estimated speed of twelve to fourteen knots. She is bark-rigged, but without courses, and spreads altogether 7,000 feet of canvas.

The class of steam-yachts devised and built by the Herreshoff Brothers, of Bristol, R. I., deserves special mention, combining as it does certain highly creditable features of construction and motive power that have enabled their boats to make a notable record for speed and seaworthiness. The method of construction is composite, the frame being usually of angle-iron, to which the wooden planking is secured by composition bolts and brass screws, the weight of material being distributed according to the estimated greatest strain, so as to combine maximum strength with minimum weight. In the lines, the wave-line is avoided, the entrance being an acute wedge. The Herreshoff boiler consists of a helix-like coil of wrought-iron pipe placed over the furnace and fed from above, its entire surface being exposed to the direct action of combustion. The steam, with such water as has escaped vaporization, is delivered into a "separator," whence the steam escapes to the engine, while the water is returned by the pump to enter the pipe again. This circulating process economizes heat and, it is claimed, utilizes steam more perfectly than any other system. Three to five minutes suffice, under test conditions, to make steam enough to start the engine. The boiler is practically non-explodable, and is remarkably light in proportion to its power. The surface-condenser is usually a copper pipe on the outside of the submerged section of the vessel. In some of the torpedo-boats an indicated 150 horse-power has been obtained from an engine weighing 1,500 pounds. These boats have been tested and approved by the United States, British, Russian, French, and Peruvian Governments, and have made remarkable records. One of the torpedo-boats built under contract for the United States to make nineteen miles an hour, made twenty-three miles an hour on her trial-trip, and a 35-foot launch, built for Jay Gould, made 14·4 miles an hour with a pressure of 168 pounds of steam.

The latest triumph in the way of small, swift steamers is beyond question the "Stiletto," built by the Herreshoffs. She made her appearance in New York waters in the early summer of 1885, and was present during all the excitement of the international races, proving herself among the fastest steam-vessels afloat. She easily distanced the fastest of the river and sound steamers, and while a mistake left the result of a race with Jay Gould's yacht "Atalanta" technically undecided, it is probably true that she is the faster of the two. The "Stiletto" is 94 feet over all, 90 feet on the water-line, 11 feet beam, and is 28 tons displacement. The hull is double planked, sharp at both ends, with curves extending far toward the midship-section. She draws 3 feet at the bow and 4½ feet at the stern. A deck, slightly arched fore and aft, covers the whole boat. The engine is a compound condenser, with 12-inch stroke, and cylinders 12 and 21 inches in diameter. The boiler is similar in principle to the ordinary Herreshoff boiler, but differs in some details, the tubes being arranged horizontally in sets immediately over the fire, each set being at right angles to that just above it. The fire-box 6½ feet square. A common pump carries the water of the exhaust from the condenser to the upper set of boiler-tubes, and through the boiler to a separator in its immediate front, with which the steam-pipe is connected. The estimated limit is 450 horse-power, but in passing some of the swiftest steamers only 125 pounds of steam was used, while the boiler will work safely at 160 pounds. The screw is four-bladed, with 6½ feet pitch. The builders claim that she is the fastest steam-vessel in existence.

Ice-yachting has, within a dozen years, become a popular winter pastime. The Hudson river, between Newburg and Albany, is most favorable to the sport, and there the ice-boat has reached its highest development. In construction these yachts are simple, but they require strong and careful workmanship. The ordinary rig is a jib and mainsail, but the cat-rig is used to some extent, and recently the lateen, with "shear" or double masts, as shown in Fig. 6, has been tried with fair success. Ice-yachts are always manœuvred, whether on or off the wind, with the sails trimmed flat aft. The friction of the runners when under headway is so slight that it need not be considered at all, and the mainsheet need not be started in order to attain a speed equal to that of the wind when running free. On the wind the case is different, and it is here that the ice-yacht attains its tremendous velocity, outstripping the wind that drives it The possibility of its doing this is always questioned by those who have not given the matter attention, and a diagram (Fig. 7) is appended in demonstration. It must be borne in mind that the runner-friction, when a moderate speed is attained, is inappreciable, but the passage of frame and top-hamper through the air at a high speed amounts, of course, to a considerable item. In the diagram the arrow shows the direction of the wind blowing at right angles against the sail, *d*. The boat D is supposed to be steering a straight course from A to C. A moment's consideration will show that, if the elements of air- and ice-friction could be eliminated, the boat would move from A to C while the wind was passing over a distance equal to A B. In point of fact, it can not literally do this, owing to mechanical imperfections, but it approximates the result indicated, and, under exceptionally favorable conditions, has attained a speed estimated as high as 80 or 100 miles an hour, the wind at the time not blowing more than 30 or 40 miles an hour, and probably far less than that. Official records of runs over measured distances have frequently exceeded a mile a minute.

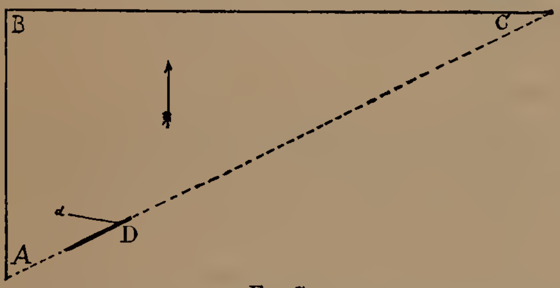


Fig. 7.

Z

ZANZIBAR, a monarchy occupying the island of Zanzibar in the Indian Ocean, and the opposite coasts of the Continent of Africa. The reigning sovereign is Sultan or Seyyid Bargash ben Said, who succeeded his brother Madjid, Oct. 7, 1870. The British Government induced Seyyid Bargash to sign a treaty promising to suppress the slave-trade within his dominions, which he has endeavored to execute. He has been guided in his policy by British influence, exercised through the English consul-general, Sir John Kirk.

Zanzibar is economically a dependency of British India. Indian trade has been established there from early times, and Indian sultans formerly ruled on the coast of the mainland. In 1784 the island became a province of the Sultan of Muscat. In 1856 it became independent by the intervention of the Indian Government. In 1861 the Indian Viceroy arranged terms with the Sultan of Muscat by which the latter receives an annual sum from the Indian exchequer in lieu of tribute from Zanzibar, which the Indian Government receives back from the Sultan of Zanzibar in periodical payments. Bargash ben Said, who was at that time in Bombay, a fugitive from his relatives, was recognized as heir to the throne at the dictation of the Indian Government. In 1862 the independence of Zanzibar was guaranteed by Great Britain and France. In 1884 it was recognized at the African Conference in Berlin. The trade and revenue of Zanzibar have greatly increased, and the political and military organization of the sultanate have been to a great extent developed, during the reign of Seyyid Bargash. His army was organized and is commanded by Gen. Matthews, an English officer. Of late years, since the English Government ceased to encourage political reliance on England, Germany and France have sought to acquire influence in Zanzibar.

Statistics.—The area of the island is 1,590 square kilometres; that of the neighboring island of Pemba, 960 square kilometres. The Sultan claims authority over the coasts of the mainland from Warsheikh, in 3° of north latitude, to Delgado Bay, in latitude 10° 41′ south. The population of the island of Zanzibar is from 100,000 to 200,000. The ruling class is of the Arab race; the rest of the population are negroes, except a large contingent of foreigners engaged in trade. There are about 6,000 British subjects, mostly Parsees and Hindoos, in the city of Zanzibar, and 16,000 in other parts of the sultanate. Zanzibar, the chief town, has from 80,000 to 100,000 inhabitants. The Sultan exercises effective sovereignty on the mainland—where the population is composed of Somalis and Gallas in the north, and negroes of a great variety of tribes in the south—only over the districts on the coast and the caravan routes into the interior. The Sultan has a military force of 1,400 men, and a naval vessel armed with 22 guns. There is besides a large irregular force of Arabs employed on the coast. The annual revenue is about $1,250,000. The principal source of revenue is the customs, which the Sultan farms out for about $460,000 a year. The value of the imports in 1883 was about $6,100,000; of the exports, $4,000,000. The exports of cloves were valued at $1,050,000; of gum-copal, $196,850; rubber, $750,000; skins, $184,123; red pepper, $36,000. The value of the transit-trade in ivory is about $1,500,000. The leading articles of importation are cloths, mostly cotton, rice and grain, guns, and kerosene. The largest trade is with Great Britain, the next largest with the United States, Germany coming next, and then France, India, and Arabia. Of 108,079 tons entered at the port of Zanzibar in 1883, about half was British and one quarter Arab; the American tonnage was 6,946.

German Annexations.—In October, 1884, Count Pfeil, Dr. Peters, Herr Jühlke, and Herr Otto left Berlin on a secret mission. Their destination was ostensibly the Transvaal; but they landed at Zanzibar and, ascending Waami river, concluded treaties with the tribes along the banks in the name of the German East African Company. In this way they acquired titles to the territories of the Nguru, Usagua, Makata, and Usagara tribes. a region lying between Zanzibar and the great lakes, abounding in minerals, especially coal. Iron-mines are worked by the natives in Usagara and the Itumba mountains. The climate is sub-tropical, favoring the cultivation of coffee, tobacco, vanilla, rice, tea, maize, cocoa, sugar, and silk, and also of some of the products of temperate latitudes. There is a superabundant rainfall.

A seat of government for the colony was established at the village of M'Kongwa; and the Emperor of Germany gave the company a patent of imperial protection on March 3, 1885.

The German East African Association was founded by a group of enterprising young men who in the spring of 1884 made up a small capital for the "practical solution of the colonial question." Its existence was not generally known until the imperial letter of protection and sovereignty was published. The expedition arrived in Zanzibar on Nov. 4, 1884. The expedition of Lieut. Becker had already started out for the purpose of acquiring the territory they had in view for the Congo Association; and leaving the greater part of their stores and munitions behind, they outstripped the agents of the Belgian Association in a march so severe that Herr Otto died. They concluded twelve treaties with ten sultans. Five subsequent expeditions were sent out to the territory. Two others added to the possessions of the Association the district of Chutu and the Kilimanjaro country, increasing the area of the colony to 144,000 square miles. Dr. Jühlke, who conducted the expedition to the mountainous region of the Kilimanjaro, returned to Zanzibar on July 6, 1885, after making ten new treaties with native chiefs, acquiring Chagga and other districts in the neighborhood of Mount Kilimanjaro.

The object of the East African Association is to establish not only trading-stations, but an agricultural colony. The region selected for the enterprise, on the slopes of the Kilimanjaro, is adapted for European settlement. At the end of six months from the time it was chartered, the company possessed a factory and an agricultural station at Usagara, and had organized a civil administration, and begun to create a military force, recruited from the native population. The official *personnel* numbered about twenty persons, most of them German officers. The labor for the prospective plantations was to be supplied either by the native ex-slaves, or by imported Javanese, Chinamen, or coolies. The society aims at the gradual emancipation of the slaves, who now perform all the labor in the regions under its administration. No slaves are to be freed without compensating the owners. Those who are freed will be compelled to work on the plantations of the society, receiving a share of the produce, until they are educated into a property-possessing laboring-class and can be trusted with complete freedom.

Several quick-firing cannons of special design were made by Krupp for the defense of the stations against attacks from Arab ivory- and slave-traders, such as Tipu-Tip, the organizer of a vast slave-collecting system in the eastern and most valuable part of the territory of the Congo State, who rivals Seyyid Bargash in wealth and power.

Conflict with Germany.—On March 16, 1885, Dr. Gerhard Rohlfs, the German consular agent in Zanzibar, officially informed Seyyid Bargash of the acquisition by Germans of territories west of his dominions, over which territories the German Government had extended its protection. He had already begun negotiations with the Sultan for a treaty of friendship and commerce with Germany, guaranteeing freedom of way across his territory to the new German possessions.

The German representative also notified the Sultan that the German Government had proclaimed a protectorate over the dominions of the Sultan of Vitu. This Sultan is a savage potentate, ruling over a town and district on the coast, in 2° of south latitude, and claiming to be suzerain over Kilimanjaro and Kenia. The coast kingdom of Vitu, lying between the rivers Dana and Osi, is 150 miles south of the Juba, which Seyyid Bargash claims to be the limit of his territory.

The Sultan of Zanzibar has exercised effective sovereignty over the coast of Gallaland, with the exception of Vitu, or Suaheliland, on the shores of Formosa Bay, which belongs to the nomadic Gallas. Farther north, on the Somali coast, there are settlements where he maintains his authority through the instrumentality of a governor and a military force. The Sultan of Vitu is an Arab, who has a hereditary quarrel with the Sultan of Zanzibar, arising from the conquest of a portion of his dominions by the ancestors of the latter. In 1867 he asked for a German protectorate. On April 8, 1885, he sold to Clemens Denhardt about 800 square miles of his territory, and sent to the consul-general in Zanzibar a formal request to be taken under the protection of the German Empire.

Seyyid Bargash, encouraged by Sir John Kirk and the English, laid claim to all the territory annexed by Germany. The chiefs who had ceded territory to the East African Company he declared to be his vassals, possessing no right to make cessions. To the proposals of the German consul-general, he replied that he preferred to "continue his trust in God and Great Britain." On May 27, 1885, Sultan Achmed of Vitu was formally taken under the protection of the German Emperor. The soldiers of Seyyid Bargash invaded the territory of the German colony in May. Count Pfeil protested, and raised the German flag. The Zanzibaris responded by raising the Sultan's flag; and a mob of Arabs destroyed the house and garden of the chief of the German colony. Another expedition was sent from Zanzibar to reduce to subjection the Sultan of Vitu. It came into actual collision with the German expedition then in Vitu. Gen. Matthews, with a body of soldiers, visited the various chiefs between Pangani, Mombassa, and Kilimanjaro, prior to the arrival of Dr. Jühlke, and with threats or presents endeavored to induce them to recognize the suzerainty of the Sultan and raise the red flag of Zanzibar. Chief Mandara, who ceded the Kilimanjaro district to Dr. Jühlke, had the Zanzibar standard hoisted over his village, but denied that he had acknowledged the sovereignty of Seyyid Bargash, who was only his equal in power. The other chiefs of the region denied that they had entered into any engagements with Gen. Matthews. On the ground of the treaties alleged to have been made with his general, the Sultan of Zanzibar claimed prior suzerain rights. These new acquisitions of the East African Company were not included in the protectorate granted by the Emperor. When the German Government heard of the Sultan's acts of hostility, it sent a naval squadron to Zanzibar. On July 31 the iron-clad corvettes "Stosch," "Gneisenau," "Elisabeth," and "Prince Adalbert," with the tender "Ehrenfels," under the command of Commodore Paschen, anchored before Zanzibar, and the German admiral presented an ultimatum, threatening to bombard the town unless the Sultan recalled his troops that were levying tribute in regions under the protectorate of Germany. The Sultan appealed to the British fleet for protection; and Lord Salisbury, in a communication to Prince Bismarck, asked that Germany's claims be held in abeyance until the English Government had time to consider the Sultan's appeal. Meanwhile Seyyid Bargash recalled his troops from Vitu, Usagara, and the Kilimanjaro region. In September the East African Society announced that its agent, Herr Hörnecke, had acquired, by means of treaties with native chiefs, the territories north of Kilimanjaro as far as Dana river, connecting its possessions in the Kilimanjaro region with Vitu. In the southern part of the nominal dominions of Sultan Bargash, the society acquired territory on the banks of Rufiji river. With the acquisition of the district of Usaramo in September, the entire course of the river was placed in the hands of the company, as well as the neighboring coast. The safe and deep harbor of Dar-es-Salam is in this district. By virtue of an agreement extracted from Seyyid Bargash, who became tractable and accommodating as soon as he found that the new Government in England would not back him up, the free use of this port was conceded to Germany. The result of the intercession of the English Cabinet was an agreement for the delimitation of the territories of the Sultan of Zanzibar on the mainland, by a commission composed of representatives of Great Britain, Germany, and France. On Dec. 20 a treaty of commerce was concluded with Admiral Knorr, commander of the German squadron on the east coast of Africa.

ZYMOTIC DISEASES. Cholera was first described by a celebrated physician of Goa, Garcia del Huerto, in 1560. It is endemic in India, born and nourished in the filth of the over-populated districts of that country, and thence it spreads westward in the form of epidemics. Its journeys are made by short stages, which follow the lines of commerce, and it spreads, beyond a doubt, by actual contact. One feature that has been noticed about its travels is, that it has never been shipped aboard vessels rounding the Cape of Good Hope. Cholera appeared in India in 1774, causing a very large number of deaths. In 1817 the disease again occurred in India, and, after destroying many lives, took up its line of march, visiting almost every inhabited portion of the earth. Russia was reached in 1830, Germany in 1831, and England in 1832. The first death by cholera in North America occurred in Quebec, early in June of 1832; on the 22d of the same month its arrival in New York city was announced, and its journey westward to Cincinnati and New Orleans began. Great consternation and many empty households were created in the little villages upon the banks of the Ohio and Mississippi rivers. Not satisfied with this invasion, the destroyer again visited our country in 1834, 1849, 1852, 1866, 1867, and finally in 1873. In 1883 Egypt suffered from an extensive outbreak, and from this has, no doubt, originated the pestilence that has been raging in southern Europe during the past two years. In the latter part of March, or early in April, 1884, cases appeared at Toulon, which were closely traced to contact with persons that had arrived in a vessel coming from Tonquin. The affection spreading, the inhabitants became alarmed, and left the city in great numbers before any sort of quarantine had been established.

Within a short time cases appeared in Marseilles and the surrounding villages, carrying off many of their inhabitants, but by the end of September the epidemic in France had ceased, the number of cases reported being from 8,000 to 12,000; deaths, from 3,000 to 6,000. Owing to more favorable conditions, climate, and habits of the people, Italy suffered much more severely than did France from this epidemic. The pestilence appeared at Naples about the middle of July, brought by a vessel that had on board many persons who had fled from Toulon, and the cases are said to have been fully 15,000, and the deaths over 10,000. In Genoa the disease appeared at the time it was abating in Marseilles, and being of a very virulent type, carried off an unusually large percentage of those afflicted. Many of the villages of Italy suffered, the type of the disease not seeming to be influenced by the distance it traveled from great centers of population. It spread to Spain, not to any great extent, but sufficiently to find a resting-place until ready to break out in the great epidemic of 1885.

Spanish statistics are often falsified, and are generally incomplete, but investigation shows that the epidemic was following a progressive march, for on Jan. 1, 1885, a dispatch from Madrid acknowledged the existence of cholera in Spain. There had been cases in Valencia, Catalonia, and Toledo for some time, but the first cases acknowledged occurred at Jativa, whence, following the course of the Jucar, it invaded the towns along this stream, and from these the infection was carried to the other cities, in the center and north of the Peninsula. The type was the same virulent one that had raged in Genoa during the previous year. At some points in Murcia and Valencia the mortality averaged 50 per cent. On April 7 the Valencia authorities begged for assistance from the Government, as the disease was spreading with alarming rapidity, and the people were panic-stricken. In this province vaccination for cholera was first practiced to any considerable extent, the first operations being performed in the latter part of April, many inhabitants being inoculated. All the provinces of Spain sent doctors to Valencia to study the method. By the middle of May, over 4,700 persons had been inoculated with cholera-microbes by Dr. Ferran. The new system was regarded as successful. An English commission, consisting of four physicians, was appointed to visit Valencia and investigate the matter in company with Ferran, and to examine also those upon whom the operation had been performed, and report whether the operation entailed any danger and conferred protection. Some grave doubts as to the value of cholera inoculations now arose, and the Spanish Government, on May 25, prohibited further inoculation, pending the decision of a board of investigation that had been appointed. This order, however, was rescinded, and on June 4 the Government granted permission to inoculate people with cholera-virus. In the mean time another commission had been appointed by the Belgian Minister of Public Instruction. The commissions carefully investigated the subject, and made their reports. It was shown that the new discovery did not confer protection, and that the alleged results were erroneous, and the method was quickly abandoned.

Ferran published early in March, in "La Independencia Medica," of Barcelona, the details of some investigations and experiments he had been making concerning the comma-bacillus, which Koch had previously described. Ferran had been making an exhaustive study into its natural history, and claimed that he had followed the microbe through all the phases of its existence, and had found it, in certain periods of its evolution, under forms never before described. and that he had always been experimenting in the direction of the attenuation of the virus of cholera, in order, by inoculation with it, to produce a modified form of the disease, which would secure immunity for the subject from the graver malady. His method consisted of two inoculations: the first, when a principle of immunity seemed established; the second, when this immunity seemed to become absolutely complete. For performing the inoculation in man, according to Ferran, a certain quantity of the culture of the specific microbe is injected under the subcutaneous cellular tissue, one gramme of fluid being sufficient. At once a smarting is felt at the point of puncture, but this soon disappears. Within two or three hours a small red point is seen, corresponding to the portion punctured, and a considerable amount of swelling surrounds the orifice. The temperature near the puncture is elevated, and motion causes pain in the surrounding muscles. These phenomena continue for about six hours, when all unpleasant sensations begin to disappear. The day following the inoculation, Ferran claimed that only a slight tenderness upon pressure was noticed, and by the fourth day the wound had entirely healed. He also claimed that the proof that the inoculation gave a certain amount of immunity was the fact that he could not renew the vaccination upon the same person. In some cases, severe disturbance resulted from the inoculations—prostration, nausea, vomiting, rigors, and abundant diuresis.

The first to submit himself to the risky experiment was Dr. P. Sarenana, of Catalonia. On Feb. 23 he received an injection into each arm of half a cubic centimetre of the attenuated virus. He says that in less than three hours severe pain was felt in the posterior portion of the arms, which increased, and movement became very painful and difficult. At the end of seven hours he had a severe chill, followed by languor, elevation of temperature, headache, and insomnia. The pulse became very rapid. This condition continued about twenty-four hours, when all symptoms abated. Dr. Eugene Jacques was the second to submit to the operation, and although he received only half a cubic centimetre in one arm, his sufferings were more severe than those of Dr. Sarenana. In addition to greater elevation of temperature, he experienced nausea and cramps. An examination of the blood, eighteen hours after inoculation, was said to reveal the presence of micrococci. Ferran claimed that this was the first form assumed by the comma-bacillus, when injected into the living organism. In the diarrhœal dejections that followed the operation, he claimed to notice the oögonia oöspheris and spherical green corpuscles. He considered, also, that this diarrhœa, which ceased of itself, confirmed the fact of immunity from cholera. Ferran further claimed that he had inoculated 5,400 persons of Alcira, and that only seven suffered from cholera during the epidemic. These claims, though seeming to be warranted by the observations that Ferran has recorded, have been opposed by recent experiences with the epidemic, and have been sharply criticised by investigators. M. Capitan, after careful investigation, decided against the claims of Ferran, saying that "the organisms described by Ferran are most singular and strange, never having been noticed by observers who have been especially occupied with this question. The technical manipulations of the Spaniard are full of faults, and exceedingly defective, the sterilization being far from complete, and the introduction of foreign microbes not guarded against. It is curious that the intestinal inoculations, which do not succeed with Ferran's cultures, do succeed with those of Nicati, Rietsch, and Livon. Ferran's experiments are full of failures."

Prof. Van Ermengen, in his report to the Belgian Minister of Public Instruction, concerning the cholera vaccination of Ferran, says: "The vaccine contained none of the varied forms of development described; the subcutaneous injection of his vaccine liquid, in the quantity of 2 c. c., produces in man phenomena of local irritation and slight febrile reaction, very different from the syndromata of cholera. Blood taken from six cases in which inoculation had been practiced exhibited the characteristics of normal blood, and contained no micro-organisms. It remains to be shown that the local inflammation produced by the injection of vaccine is due to a specific action of the microbe upon the tissues, and not to the bile which M. Ferran adds to his cultures. M. Ferran did not consent to the performance of control experiments to establish this point. Inoculations in the cases observed have been without deleterious results. It is doubtful whether the vaccine of M. Ferran is of attenuated cultures, the methods by which they were obtained being unknown to me, Ferran refusing to reveal them until after his communication to the Académie des Sciences de Paris. The statistics collected, hitherto without control, and solely by partisans of the prophylactic system of Ferran, are not sufficiently complete or precise to allow any decision whatever to be made as to the efficacy of the inoculations."

In conclusion, it might be said of Ferran's claims that he has empirically found an attenuated virus susceptible of conferring immunity; but there are serious objections concerning the existence of this immunity. Cholera, like diphtheria and many other infective diseases, may be repeated in its attacks, and one attack does not confer immunity. In the latter part of September the President of the United States issued an executive order directing Dr. E. O. Shakespeare, of Philadelphia, "to proceed, under direction of the Secretary of State, as the representative of the United States, to Spain and other countries in Europe where cholera exists, and make investigations of the causes, progress, and proper prevention and cure of the said disease, in order that a full report may be made to Congress during the next session." Dr. Shakespeare departed upon his mission on Oct. 10, and returned in March, 1886. From careful collection of statistical reports, it might safely be said that during the epidemic of 1885 there were in Spain upward of 250,000 cases of cholera and 92,000 deaths. The largest number of new cases reported in a single day was on Aug. 11—6,464 cases and 2,109 deaths. On this day, in Madrid alone, there were 52 new cases, with 38 deaths. The number of infected Spanish towns was over 380. The panic that prevailed throughout the country was daily increasing, and on Aug. 14 fully 60,000 persons fled. Toward the latter part of the month the disease seemed to be declining, and on Aug. 31 it was reported from Madrid that the daily average decrease was 300 new cases and 140 deaths; by the end of October the daily number of new cases reported throughout Spain was fewer than 40. In Madrid the only wealthy citizens attacked were the officials who were compelled in the discharge of their duty to visit infected localities among the poor.

On Jan. 5, 1885, the first cases were reported from France, cases occurring on an island off the coast. For several months suspicious cases occurred in the south of France, but it was not until July that the authorities of Paris began operations for the protection of the citizens. Posts of observation to prevent the introduction of cholera from Spain were established on roads leading into France, as it was acknowledged that the disease had crossed the frontier. In the early part of July cases were discovered in Marseilles; and, as the number increased, a panic resulted. The local press was ordered to preserve silence respecting the ravages of the disease. The sanitary condition of the city was bad. The heat, which since May had been great, became oppressive, Aug. 18 being the hottest day experienced in Marseilles for years. The cholera assumed a most virulent form, its victims dying suddenly, without the occurrence of diarrhœa or vomiting, their bodies becoming black shortly after death. The most fatal day at Marseilles was Aug. 21, with a death-rate of 69; that of Toulon was Aug. 27, on which date 42 deaths were recorded. The subsidence of the scourge was gradual. The epidemic in Marseilles, from its outbreak to Oct. 1, had claimed 1,230 victims.

In the early part of August, cases presenting allied symptoms to those of cholera were reported from points in Italy. A commission to examine the hospitals and take precautionary measures against cholera was appointed. The disease did not exist to any great extent in the Italian provinces prior to Aug. 29, at which time there were a few cases in Liguria. Within three days, however, persons were stricken down in Penzone, near Acqui, province of Alessandria. The contagion here had been conveyed by a family coming from Marseilles. On Sept. 1 the disease appeared in the province of Genoa, at Turo, Voltri, and Borgo Taro. Suspicious cases were also reported from Parma and Caccia; and, notwithstanding that precautionary measures were ordered immediately, 146 cases, with 86 deaths, appeared in the infected districts within a week. Cases occurred at Palermo in the second week of September, 10 being reported in one day. The sanitary condition of this town was such that the disease ran riot among the people, and in one day there were 258 new cases, with 175 deaths; 30,000 persons fled from the city in one day. All the shops were closed, the streets were deserted, and there was a great scarcity of food and water. The sanitary officials were attacked by the people every time they attempted to disinfect the houses where the disease prevailed. The epidemic seemed at its height about Sept. 20–23. The most accurate reports show that in Palermo, between Sept. 13 and Oct. 20, there were 1,872 cases and 1,016 deaths.

During 1885 cholera appeared also in England and at Odessa. The cases reported in England appeared at Durham; but the disease did not spread, on account of the precautions taken, and there were no fears of an epidemic. At Odessa, six cases were reported on Aug. 12.

Cholera appeared on board the United States man-of-war "Ossipee," off Nagasaki, in the latter part of August. The disease raged in Japan with considerable virulence. In October there were 1,208 cases and 628 deaths in Osaka and vicinity, and in Hiogo and Kobe there were 354 cases and 227 deaths during the same period. During November there were 58 cases and 47 deaths at Kobe.

The year 1885 was memorable in the history of researches in regard to cholera. The various governments were represented by able investigators at the International Conference held at Rome. Able papers have been read before the medical associations of America, Great Britain, France, and Germany, and the views of Koch are still disputed to as great an extent as at the beginning of the year. The majority of investigators hold that Asiatic cholera is a specific disease, due to the agency of a specific cause, which attacks the human being always by way of the alimentary canal; that the cause of the disease acts primarily upon the epithelial lining of the mucous membrane of the small intestines, which it has a tendency to destroy, and secondarily upon the blood and nervous system; that this cause is essentially of a living organic nature, endowed with the power of multiplication and propagation within the intestinal canal of the human being, under certain favorable circumstances not as yet well known; that it passes in a living, active state, by means of water, food, or other substances that contain the active cause and are introduced into the alimentary canal. The power of multiplication and propagation of this specific cause is limited and finally destroyed by certain not yet well-known unfavorable conditions. These unfavorable conditions exist over the whole world, except possibly in the province of Bengal, Hindostan. Science has shown that much, if not all, can be done by individuals, by municipalities, and by states, to avoid an attack or an epidemic of cholera. The Section of Medicine in the Congress of the French Association for the Advancement of Science, held in August, 1885, unanimously declared that cholera should be arrested at its entrance at the Red Sea, and that the various governments should insist upon the proper precautions upon the frontiers, medical inspection of travelers, together with the inspection of wagons, the disinfection of bedding, garments, and other miscellaneous objects, by moist heat. The recommendations of the International Conference at Rome, as regards maritime quarantine, were also approved by the Congress, as being highly important. The French Congress further declared that the sanitation of cities is the only efficacious means of staying the progress of the epidemic.

The specific cause of cholera is said to be some living organism, capable of multiplication and propagation. Koch claims to have discovered it, and found it to be a specific micro-organism belonging to the vegetable kingdom, having specific qualities that distinguish it from all other known plants. His claim is essentially fivefold: first, that a certain specific plant is constantly to be found in the intestinal contents of persons suffering with cholera; second, that it is found in the intestinal contents in no other disease; third, that it has certain vital characteristics, which readily distinguish it from all other species yet known; fourth, that it has therefore a diagnostic value of the greatest importance; fifth, that it alone has the property of producing or exciting Asiatic cholera, and that without its agency the disease can not exist. The views of Koch, while not absolutely proved, have not as yet been disproved. That the curved bacilli are found only in cholera, and that without their agency the disease can not exist, is a matter of much dispute. Curved bacilli have been found by some observers in the exudation of pneumonia, in the intestinal discharges of diarrhœa, of typhoid fever, and of dysentery, and Dr. Shakespeare is inclined to the view that they exist in the vaginal discharge of puerperal fever. Emmerich, of Munich, claims the discovery of a straight bacillus, upon which cholera is essentially dependent, and which can produce a similar disease in the lower animals. He terms it the Naples bacterium, and says it is only found in the blood, in the tissues of organs, and in the intestinal contents of cholera subjects. Emmerich further claims that it is the only bacillus always found in the subjects of cholera. During the past year Pettenkofer has expressed the view that cholera morbus is but a form of cholera.

Cholera is not contagious, attacks persons of any age or sex, and is most fatal among the intemperate and those careless as to personal cleanliness. The disease is most severe in hot, moist climates, in low altitudes, and in the warmer rather than in colder seasons of the year. In nearly all places where a great difference exists between the summer and winter temperature the disease has disappeared during the cold season, and attained its greatest intensity during the hot months. An exception to this is, that cholera has appeared in some of the cities of Russia, Sweden, and Norway in winter. There is no doubt that cholera is favored in its spread by poverty, crowding, filth, and intemperance; but it is equally certain that these agencies can not generate the disease; the presence of the active specific cause is essential. All communicable infectious diseases are favored in their spread by unfavorable sanitary conditions, but cholera in an epidemic form does not prevail in a community unless its mysterious specific cause is introduced. The special fomites of the cholera-poison are articles of clothing soiled with the discharges from the sick and the emanations from privies, sewers, and water-courses into which the discharges have been cast. Water that is contaminated by the discharges of cholera-patients is the most rapid and efficient agent in disseminating the disease. A very small quantity of the cholera-matter is capable of infecting the entire water-supply of a city. There is no doubt that when cholera suddenly becomes epidemic in a city or village, it is by means of a contaminated water-supply. When the germ is introduced in other ways, it spreads slowly.

During an epidemic of cholera the liability to be attacked is greatest when the vital powers are depressed by mental or by physical causes. Individuals should not become alarmed, but lead a regular, quiet life, avoiding all excesses. The diet should not be changed suddenly, and, most important, all water for drinking or cooking should be boiled. This should also be done with milk. The house should be put in order and thoroughly cleaned, and cellars and privies disinfected with chloride of lime or a solution of carbolic acid. Koch regards this latter agent as the most effective of all disinfectants. Cleanliness of person, and, if possible, the avoidance of those infected with the disease, is also important. All articles of clothing, bedding, etc., that have been near the sick, should be thoroughly disinfected, or, better still, burned. After handling a sick person, the hands should be washed in a five per cent. solution of carbolic acid, and care should be taken that no food is eaten by the well in the sick-room.

There is little doubt that, with proper treatment in the earliest stages, the majority of cholera cases recover. In the later stages of the disease, treatment is not so satisfactory, and there are certain sudden, violent cases, in which any form of treatment is of little avail. A treatment recommended during the past year consisted of small doses of corrosive sublimate. This was supposed to kill the bacteria, but anti-bacterial agents can not be relied upon to cure cholera. It has been shown that neither alcohol, camphor, laudanum, chloral, mercury, nor carbolic acid, would kill the bacteria in the small quantity that could safely be administered to the human being. The greatest reliance must be placed in remedies checking the diarrhœa of the early stage, in stimulating remedies, in friction, warmth, and certain remedies demanded by certain conditions. A treatment highly recommended in Spain, in 1885, was the rectal injection of ether. A Spanish physician claimed to have saved fourteen out of fifteen patients in the second stage of cholera, by enemata of ether.

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